Vermont Early Learning Standards

Instructor's Guide

June 2005

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Many talented individuals contributed their time, wisdom and experience to the Vermont Early Learning Standards Instructor's Guide. They are listed below, along with the VELS domain they contributed to:

Approaches to Learning: Shawn DuBois, Christina Manna, Jim Squires, and Janice Stockman

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Introduction

Deepening Professionals' Understanding of the Vermont Early Learning Standards: An Instructor's Guide

This is an exciting period in early childhood education. The public is increasingly aware that the early years are learning years that leave lasting impressions. Parents and the public look to professionals in the field of early care and education to support the development and learning of preschool children, making certain that every day children leave an early childhood program, they are better off for having been there.

The Vermont Early Learning Standards (VELS) are part of the fabric that supports early care and education in Vermont. They provide consistent, developmentally appropriate expectations to guide curricula throughout the state–in child care centers, public school programs, Head Start, family child care, and in children's own homes. Vermont is fortunate to have knowledgeable and experienced professionals such as you involved in bringing this information to the field.

Once professionals in the field were introduced to VELS, they sought additional information in the various domain areas: *Approaches to Learning; Social and Emotional Development; Language, Literacy and Communication; Mathematics; Science; Social Studies; Creative Expression; and Physical Development and Health*. We recognized that simply handing out the standards or providing a fleeting introduction would have little value and minimal effect. To ensure greater knowledge and skill among professionals, experts in the field of early childhood development and learning gathered to prepare an Instructor's Guide examining each of the eight domains in depth. This guide is designed to help instructors deliver workshops of varying length by providing background information on each domain, interactive learning activities, and professional resources.

It is not expected that a single instructor will be sufficiently knowledgeable in all of the domains to feel confident instructing in each module. We encourage you to present the modules in which you have expertise and experience, and to present together with instructors who complement your own expertise.

This guide is intended to help deliver consistent messages to the field about how children develop and learn as well as roles adults play in supporting this growth. The guide, divided by domain, is not designed as a step-by-step curriculum. We recognize that as instructors, you already have a wealth of information and training experiences to bring to this the material. We encourage you to feel comfortable integrating your own resources into these training modules.

How the Instructor's Guide is Organized

Each module is intended to provide approximately six hours of training. They may be presented in a full-day session, two three-hour sessions, or any combination you can think of that is reasonable and will achieve the objectives.

The standard format for each domain is as follows:

Materials Needed: A list of materials the instructor should gather in order to complete the module. Copies of the VELS are always needed; participants should be encouraged to bring their own, but instructors will want to have a few extra on hand just in case.

Goals and Objectives: Goals of the module aligned with the core knowledge areas of Northern Lights.

Introductions and Opening Activity: A menu of options to get participants engaged in the material.

Review the Standard and Domain: A brief review of the VELS domain, learning goals and examples.

The Development of [Domain]: An overview of key points instructors may wish to use in a mini-lecture on the topic.

What Does [Domain] Look Like?: Activities designed to help participants know how to observe and interpret children's behaviors and learning in each domain.

Reflecting on [Domain]: Opportunities for participants to reflect on their own teaching practice related to that domain.

The Adult Role in Supporting This Domain: How adults support children to develop in each domain.

The Role of the Environment in Supporting This Domain: How materials, the physical environment and structure of the day supports children in developing in each domain.

Reflecting on the Adult Role and the Environment: Another opportunity for participants to reflect on their own teaching practice, this time honing in on the adults' roles and the environment.

Putting It All Together: Engaging learning opportunities for participants to synthesize and apply their learning.

Conclusion: Instructor's opportunity to summarize key points with participants.

Handouts and instructions on how to present engaging activities follow each outline. Relevant articles and information that will help the instructor plan the session are also included. Professional resources are cited at the end of each section.

We recommend instructors use videotapes of children to demonstrate some key principles in each domain. A list of videos is provided with a description and information on how to order them. Since most high quality videos are costly, you may wish to share and borrow from each other or from a lending library in your community. Sometimes the best videos are ones that are produced by teachers and parents for the purpose of documenting their own children's learning. These are invaluable to instructors and we encourage you to use them.

An annotated children's bibliography is also provided. Children's literature is one of the best learning materials for the content areas in the VELS. Children's books can also be great sources of instruction for adults who wish to learn

about curriculum and standards. For that reason, book sets are available to supplement the activities in the instructor's outline. Feel free to use books to illustrate the key points in each of the domains.

You may wish to add your own material, as well as your own or your organization's evaluation and documentation of professional development forms. Please consider adding material that is in keeping with the approach and philosophy of this instructor's guide.

Knowledge changes over time. As new research allows us to learn more and think differently, this guide will become an evolving resource rather than a static guide or curriculum. Please feel free to adopt or adapt the materials while remaining true to the spirit that is represented in the Vermont Early Learning Standards. We think you will find these materials useful as you help others to expand their horizons, deepen their understanding and enhance their skills.

Effective staff development is an art. Simply providing a person with this guide will not guarantee a presenter's confidence or effectiveness. For this reason, we encourage you to organize, plan, and conduct training sessions in teams. The participants will appreciate differing perspectives and experiences and it will make your job easier. Also, realize that the participants have a great deal to offer as the information is presented. Capitalize on their knowledge and experience. And last, but not least, have FUN!

Shawn Dubois

Jim Squires

Janice Stockman

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Table of Contents

Module 1: Approaches to Learning

Materials Needed

- Copies of the VELS
- Handouts
- VCR and videotapes (optional)
- Flip chart, tape, and markers

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Understand the learning goals and definitions related to children's approaches to learning	Teaching and Learning
Understand how children's approaches to learning develop and change over time	Child Development
Become familiar with the role of adults in supporting the development of children's individual approach to learning	Teaching and Learning Families and Communities
Become familiar with the way the environment supports children to develop an approach to learning	Health and Safety
Increase their skills in observing and assessing how children develop their unique approach to learning	Teaching and Learning Child Development
Be familiar with professional resources and research that addresses children's approaches to learning	Teaching and Learning Professionalism and Program Organization
Be able to explain developmentally appropriate approaches to learning to others, including families	Professionalism and Program Organization Families and Communities

Note

Page references to Approaches to Learning domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg. 20. Relevant pages for this module are 5-6, 25, and 30.

Introductions and Opening Activity

- Make sure participants know each other and the instructor, including pertinent information about their work and work settings.

- Choose an opening activity from the following options:
  - ? Ask participants "Remember a time when you learned something new?" Think about what it was, what helped you to learn it, or who helped you learn it, and what did you feel/experience about yourself in the process of learning it? (Group discussion)
  - ? Break into small groups and learn a simple task together, with instructions (doing a French braid, juggling, a cartwheel, etc.). Share the experience of learning it, refer to questions above. (Small group)
  - ? *Handout 1: Sticks Activity*–What do people experience as they try to unlock the mystery of "the right way to pass"? (Large group)

Review the Standard and Domain

- Review the goals and objectives.
- Use the VELS and review the definitions and learning goals in Approaches to Learning. See VELS Pg. 5-6
- Ask participants, "Why is Approaches to Learning important? Why do you think it is the first domain?"
- Use the opening activity to have participants reflect on the learning goals and definitions of Approaches to Learning: Play; Curiosity and Initiative; Persistence; Self-organization; Reasoning; Application. Ask participants, "What did you see or experience about yourself as a learner during this activity that illustrates the learning goals and definitions?"

The Development of Approaches to Learning

Instructors should use the following key points to develop a mini-lecture on the topic of Approaches to Learning:

A child can be successful in school in many ways, and these ways vary within and between cultures. By understanding the various ways children approach learning, adults can encourage and increase a child's engagement. Curiosity, creativity, independence, cooperation, and persistence are some of the approaches that enhance early learning and development. Specifically, the VELS uses Curiosity and Initiative, Persistence, Self-organization; Reasoning and Application to define Approaches to Learning.

- Children's approaches to learning are powerful predictors of their later success in school and in learning complex skills such as reading and math (Bowman, B., Donovan, M. and Burns, M. editors. 2001. *Eager to learn: Educating our preschoolers*. Washington, D.C.: National Academy Press.)
- There is considerable variation among children in their approach to learning. Some are due to predispositions like gender, temperament and culture. Others are due to early experiences with caregivers and the environment that can support and encourage an active approach to learning, or can limit and discourage it.
- Children's early experiences with their environment and relationships with adults that support curiosity, initiative, persistence, self-organization,

reasoning and application contribute to healthy brain development. (Zero to Three National Center for Clinical Infant Programs. 1992. *Heart Start: The emotional foundations of school readiness*. Arlington, VA.)

- Knowing individual children and their unique approach to learning is key to supporting, guiding and instructing them through the learning goals of the VELS. All children deserve an individualized approach.
- Relevant Child Development theory

  Erik Erikson: According to Erikson, the socialization process consists of eight phases–the "Eight Stages of Man" (see *Handout 2*). Each stage is regarded by Erikson as a "psychosocial crisis," which arises and demands resolution before the next stage can be satisfactorily negotiated. Satisfactory learning and resolution of each crisis is necessary if the child is to manage the next and subsequent stages satisfactorily. Early childhood stages related to the development of a child's approach to learning are:

  - **Autonomy vs. shame and self-doubt:** Children learn either to be self-sufficient in many activities including toileting, feeding, walking, and talking, or to feel insecure and doubt their own abilities;
  - **Initiative vs. guilt:** Occurs during what he calls the "play age," or the later preschool years from about 3½ to entry into formal school. During it, the healthily developing child learns: (1) to imagine, to broaden his/her skills through active play of all sorts, including fantasy (2) to cooperate with others (3) to lead as well as to follow.

    Children who are not supported in experiencing initiative may become immobilized by guilt, and display the following: (1) fearfulness (2) hanging on the fringes of groups (3) continuing to depend unduly on adults and (3) is restricted both in the development of play skills and in imagination.
- Links to research in Brain Development
  - A child's approach to learning hinges on the interplay between nature and nurture (both innate abilities and early experiences matter).
  - Early care and nurturing have a decisive and long-lasting impact on children's development of their approach to learning.
  - The human brain has a remarkable capacity to change, but timing is crucial.
  - There are times when negative experiences (or the absence of positive experiences) are more likely to have serious impacts on the development of approaches to learning.
  - Early attention to providing supportive and encouraging responses to children, combined with an interesting and child-centered environment and appropriate health and safety practices help develop neurological pathways that help rather than hinder children's approaches to learning.

(Shore, R. 1997. *Rethinking the brain: New insights into early development.* New York: Families and Work Institute.)

What Does Approaches to Learning Look Like?

What does Approaches to Learning look like and how might teachers observe it in young children?

- In small groups or dyads, ask people to come up with specific examples of children demonstrating the Learning Goals of Approaches to Learning. (For instance, think of a child displaying curiosity. What happened to let you know the child was curious?)
- In the large group, select a learning activity from the following three options. Develop questions for participants related to how the adult can support/respond/extend the child's approach to learning. (Instructors may use questions from *Handout 3: Case Study*)
    - ? Have participants think of a group of children they know
    - ? Show a video of young children of assorted ages at play
    - ? Prepare a case study of a child approaching a learning task; include the child's response to the learning task (or use HO #3)
- Allow time to share responses with the whole group.

Reflecting On Approaches to Learning

Select a reflection activity from the list below. Instructors may wish to invite participants to share their reflections with the group, or not.

- Look into the future of a child you know well. How does this child's current approach to learning predict or contribute to his/her lifelong approach to learning?
- Look at your past: how did your approach to learning as a child contribute to how you approach learning today?
- Why is Approaches to Learning important? Why is it the first domain in VELS?
- How do I as a teacher provide opportunities for children to develop the learning goals outlined in Approaches to Learning?

The Adult Role in Supporting this Domain

Break into small groups for this exercise.

- Use segments of a videotape showing assorted adult-child interactions. If a videotape is not available, use the case study in Handout 3 or create your own scenario of an adult-child interaction. Ask participants to notice and record interactions that support or inhibit the learning goals of Approaches to Learning.
- Discuss each participant's observations in the small group. Ask them to use the language of the VELS when describing their observations, and be prepared to back up their assertions with examples from the video.

- Now, refer to the list in the VELS on Page 6 of what adults can do to support children's approaches to learning. Take each suggestion and amplify it–create a short scenario of an adult demonstrating these qualities in his or her interaction with a child or children.
- Refer back to the opening activity when people discussed a memory of learning something new. What did an adult do to help or hinder your learning?

The Role of the Environment in Supporting this Domain

Stay in the same small groups for this activity. The instructor can lead a short discussion on the definition of "environment".

Environment includes:

- The physical setting–room arrangement, materials, light, soft and hard spaces, furnishings, clear or cluttered spaces, wall displays, etc.
- Use of time–daily schedule, timing of transitions and routines, amount of time in each part of the day, half or full-day programming, etc.
- Rules and culture–expectations for behavior, extending respect, creating a classroom community, availability and interaction style of adults, etc.

Activity: Approaches to Learning in the Early Childhood Environment

1. Divide participants into small groups. Have each small group choose one of the learning goals and work together to describe ten features of an early childhood environment in the classroom or home that contributes to that learning goal. If a video is used, make references to how the environment supported or thwarted a child's approach to learning.
2. Post 5 sheets of flip chart paper on the wall around the room, each with the following headings: Play, Curiosity and Initiative, Persistence; Self-Organization; Reasoning; Application.
3. In their small groups, have participants go to a flip chart paper and list at least three ways the environment supports a child to develop a healthy approach to learning. Rotate the groups so each subsequent group adds new ideas to the original list. End when the groups are where they started.
4. Make sure each group has a chance to see each completed list.

Reflecting on the Role of the Adult and the Environment

Select one of the following independent writing activity questions:

- What did I do today to support a child's approach to learning?
- Recall a time when I missed an opportunity to support approaches to learning with a child or group. What were the circumstances? What was the child's/group's response? What might I have done differently?
- How does the environment of my program support children's approaches to learning?

- How can I change my environment to strengthen its ability to support children's approaches to learning?
- Allow time to share with the whole group.

Putting It All Together

Choose from among the following options for this application exercise:

- A reporter is doing an article on the VELS and wants to interview your group about how a child's approach to learning as a preschooler is important for success in later schooling. Have one person take the role of reporter and ask meaningful questions that might be of interest to parents, school boards and the general public. Have the rest of the group answer the questions using what you've learned and already know about approaches to learning.
- Your group is preparing a presentation for parents on how you/your program supports children to develop a healthy approach to learning that lasts a lifetime. Discuss and make key points that you would include in such a presentation.
- Your group is creating a list of recommendations for parents on instilling a lifelong love of learning during the early years. What are the top five things you want parents to know about children's approaches to learning?
- Use the Sandra Stone cartoons in *Handout 4* and *Handout 5* to describe how a classroom environment can be a support to children developing a healthy approach to learning.

Have each small group present their scenario to the large group. Invite comments, questions and words of encouragement.

Conclusion

Instructor's final key points should include:

- From birth, children display the dispositions that enable them to be active learners.
- Approaches to learning are unique and individualized to each child.
- Early experiences lead to development of the brain that can promote or hinder the development of healthy approaches to learning that are predictors of school success in complex tasks such as reading and math.
- Approaches to learning are defined by characteristics of curiosity, initiative, persistence, self-organization, reasoning and application of knowledge.
- Adults in a child's life and the child's environment have a strong impact on the child's approach to learning.
- Play is a vehicle for developing a healthy approach to learning.

Handout 1: Sticks Activity

Materials

2 sticks about 1 foot long (2 pens or pencils can be used)

Room Arrangement

Participants sit on chairs in a circle so they can see one another.

Time

15 minutes minimum

Goal

To have all participants independently figure out the correct code for passing the sticks to one another.

Instructor

Seated in the circle with the two sticks, the instructor says:

"I have two sticks in my hand. We will pass them around the circle to the next person. There is a "Correct" and a "Wrong" way to pass them to the next person. I will tell each of you if you are right or wrong by saying "yes" or "no." There is to be no other talking by anyone. The game ends when everyone passes the sticks correctly for one full cycle. Again, "no talking please."

The instructor then passes the sticks to the person on the left. People keep passing the stick to the person to the left.

Key for "Wrong" and "Right" ways to pass the sticks:
The secret is in the position of the legs of the person you are receiving the sticks from. If the person giving you the sticks is sitting with her/his legs uncrossed, the two sticks should be passed in a parallel position (I I). If the person's legs or ankles are crossed, the sticks should be passed in a crossed position (X), making sure that the right and left sticks should correspond to which leg is crossed on top (i.e. If left leg is crossed on top of right leg, the left stick should be on top of the crossed sticks when passed to the next person).

Depending on the number of people in the circle, this can take a very long time before everyone figures it out. If time is short, ask for six or seven volunteers to sit in a circle with you while others watch and figure out the pattern. When outside observers understand the code, they can raise their hands to let the instructor know.

If folks don't figure it out after 15 minutes, you, as the instructor, may want to be very obvious about revealing the code (without saying anything) by looking at their legs in an exaggerated fashion before handing over the sticks. Make sure there is ample time, however, for people to either figure it out or get extremely frustrated. If not enough time is allotted, people won't have the important experience of insight into their own approach to learning.

Handout 2: Erik Erikson–The Eight Stages of Man

Psychosocial crises that demand resolution before the next stage can be negotiated. Satisfactory learning and resolution of each crisis (stage) is necessary if children are to manage the next and subsequent phases with success.

In the period of early childhood covered by the Vermont Early Learning Standards, we need to know about two stages:

- **Autonomy vs. Shame and Self-doubt**: The task of children in this stage is to develop autonomy, instead of a sense of shame or self-doubt. Toddlers who begin to explore and manipulate their environment provoke responses from adults that can be characterized in two distinct ways. If they are praised for their efforts to explore and achieve independence, and adults facilitate their exploration while keeping them safe, children develop autonomy and associate it with positive feelings and self-concept. If children are met with rigid restrictions that prohibit or punish their urge to explore, or if they are ridiculed for lacking competence in the new things they try, they can develop a sense of shame and self-doubt, which serves to further restrict their urge toward independence and autonomy.
- **Initiative vs. Guilt:** The task of children in this stage is to develop initiative, instead of guilt. Children in the preschool years, also known as the play years, create ideas, fantasies and wish to try new things. When adults enjoy this quality, and provide children with opportunities to employ their ideas, they set children up to take initiative and value their ideas. When children's ideas are discouraged or not allowed, they may develop a sense of guilt for having ideas at all, let alone trying to make something happen.

Handout 3: Case Study

You bring the children to a new playground in the neighborhood to play. The most dominant and appealing piece of equipment is a very large and tall climbing structure with multiple ramps, ropes for climbing, and spiral slides. At the very top of the structure, accessible only by climbing on rope ladders, is a castle-like watch tower that has all the "bells-and-whistles" any child might want to explore.

As expected, the children scream with delight at this new playground piece, run full speed toward it, and descend upon the inviting structure. Most the children scramble their way across bridges and climb the ladders to get to the watch tower. Within a few minutes every child is on the watch tower fully engaged. Every child but one, Kaleem, who stares from the base of the structure at all of the other children having a blast.

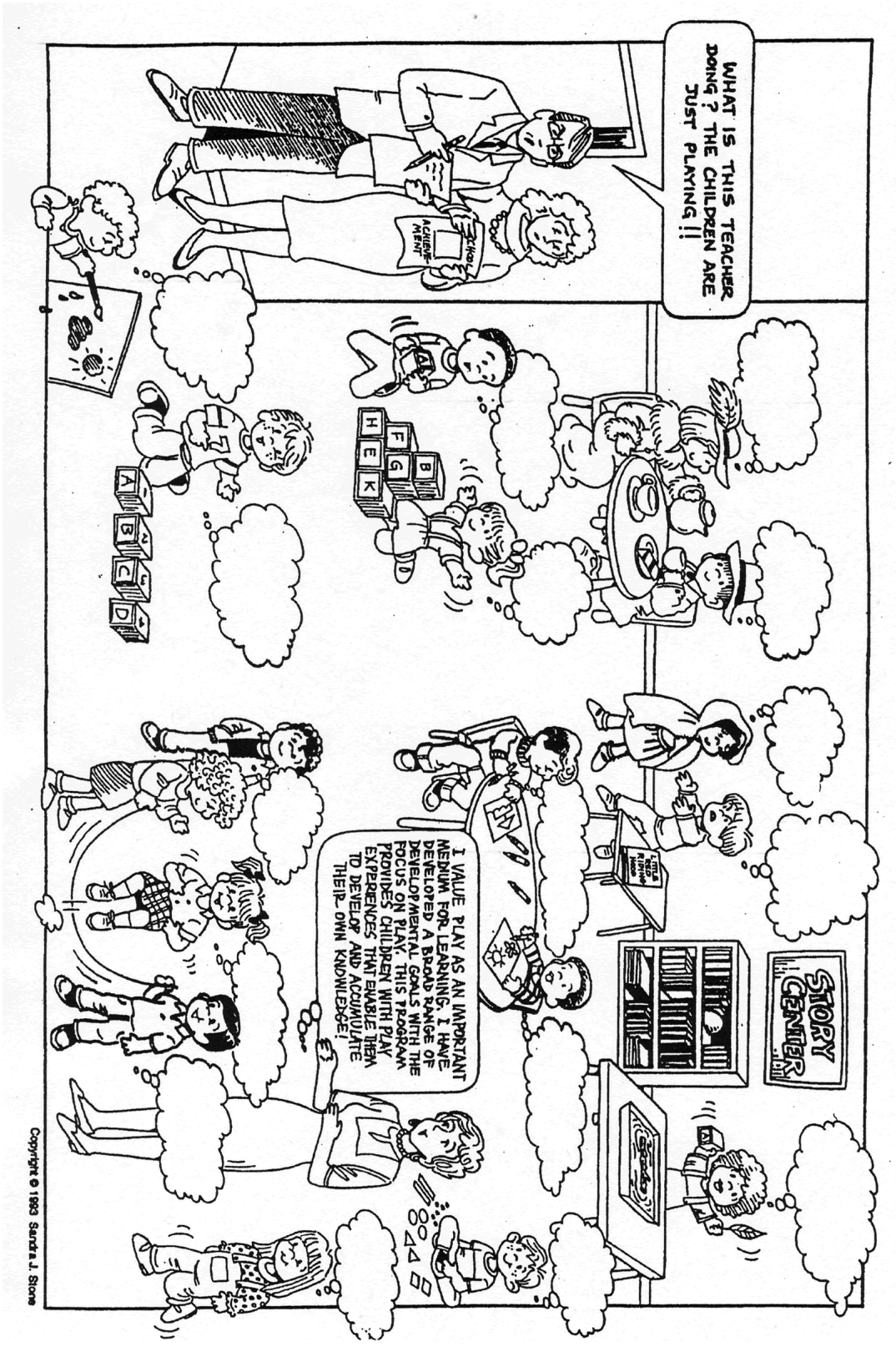
Kaleem is an intelligent, sociable, very agile, confident child who typically plays exuberantly and actively with many friends. Despite feeling well, there seems to be something that makes Kaleem act in an uncharacteristic way in this new setting. Then, after about 20 minutes, he quickly scrambles up to the watch tower with ease to join the others.

Questions to consider:

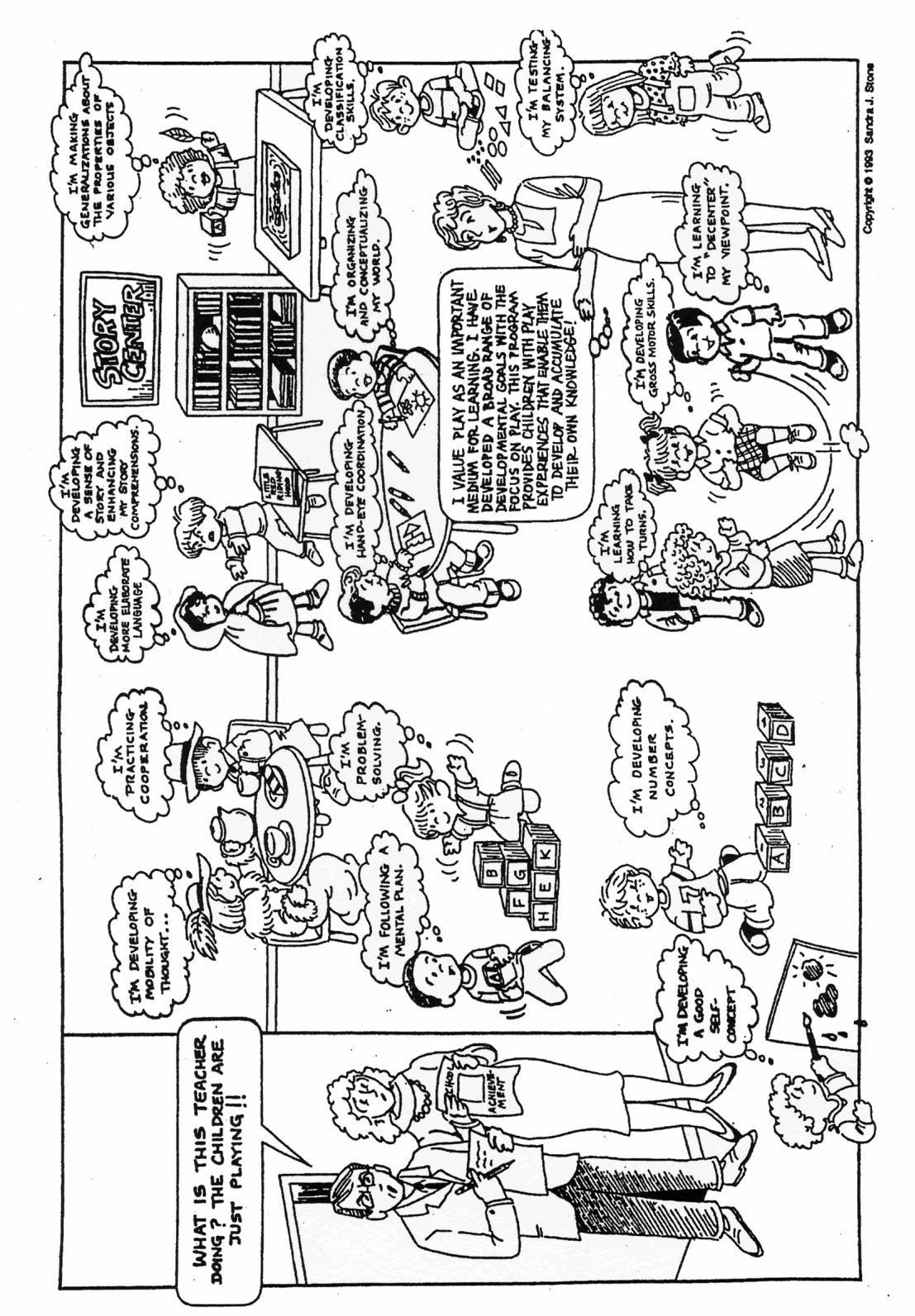
1. How would you describe Kaleem's uncharacteristic behavior?
2. What new things are you learning about Kaleem?
3. How would you respond to Kaleem?
4. What hypotheses are you developing about *why* Kaleem is acting this way?
5. Which early learning standards for Approaches to Learning come into play in your observations and interpretations of Kaleem's behavior?

This is an actual event. When approached and asked if there is some reason causing reluctance, the bright child responded "I know I can get to the top of the watch tower but I wasn't sure if I could to get down those rope ladders very easily by myself."

Handout 4: Sandra Stone Cartoon



Handout 5: Sandra Stone Cartoon



Approaches to Learning Professional Resources

Zero to Three National Center for Clinical Infant Programs. Heart Start: The emotional foundations of school readiness. Arlington, VA, 1992.

Bowman, B., Donovan, M. and Burns, M. editors. Eager to learn: Educating our preschoolers. Washington, D.C.: National Academy Press, 2001.

Shore, R. Rethinking the brain: New insights into early development. New York: Families and Work Institute, 1997.

Stone, S. "What is this teacher doing?", 1993: cartoon in the VELS.

U.S. Department of Health and Human Services. Head start leader's guide to positive child outcomes. Washington, DC, 2004

Meisels, S. Work sampling for Head Start trainer's guide. New York: Pearson Early Learning, 2002.

Supplemental Material

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Module 2: Social & Emotional Development

Materials Needed

- Copies of the VELS
- Handouts
- VCR and videotapes (optional)
- Flip chart, tape, and markers

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Understand the learning goals and definitions related to children's social and emotional development	Child Development; Teaching and Learning
Understand how children's social and emotional development changes over time	Child Development
Identify protective factor that promote resiliency	Child Development
Become familiar with the role of adults in supporting children's social and emotional development, and the protective factors that promote resiliency	Teaching and Learning; Family and Community
Become familiar with how the environment supports children's social and emotional development	Teaching and Learning
Learn how to partner with parents and guardians to support children's social and emotional development	Family and Community; Professionalism and Program Organization
Understand how children's social and emotional development is connected to all of the domains of the VELS	Teaching and Learning; Child Development
Become familiar with professional resources including specialists and consultants, and current research, that address children's social and emotional development	Teaching and Learning; Family and Community; Professionalism and Program Organization
Increase their skills in observing and interpreting children's social and emotional development	Teaching and Learning

Note ☞ Page references to the Social & Emotional Development domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg 20. Relevant pages for this module are 7-9, 25, and 31.

Module 2: Social & Emotional Development

Introductions and Opening Activity

- Make sure participants know each other and the instructor(s), including pertinent information about their work and work settings.
- Choose an opening activity from among the following group and individual activities:
- *Handout 1:Modeling an Open Circle* and *Handout 2:Opening Circle Songs* (Group activity)
- *Handout 3: Elephants and Giraffes* (Group activity)
- List some behaviors and issues related to social and emotional development that children in your programs experience. What behaviors and issues are on your mind? Ask participants to make a list of their own, and then share with a partner. Then make a big list of behaviors, issues and concerns from the entire group. (Individual and group activity)

Review the Standard and Domain

1. Have everyone read the introduction to the social & emotional development domain. See VELS, Pg. 7.
2. In pairs, have people pick one example from the list on VELS, Pg. 8. Have them recall an experience they had with a child this week that illustrates that example. Talk with a partner about the details of the incident–who, what, where, when and why. Ask, "How does this experience and example connect back to the learning goal?" What do they find valuable about that learning goal in children's growth and development?
    - Make sure there are many different examples being discussed. Share with the large group. Focus this discussion on how these examples lead to healthy social and emotional development, and also build a foundation for learning in all domains.

Background on Social & Emotional Development

Instructors should use the following key points in framing a mini-lecture on the topic of social & emotional development.

1. Differentiate between social development and emotional development.
    - Social development refers to the child interacting with others and the development of relationships.
    - Emotional development refers to the child's sense of self and personhood.

    Acknowledge that these are different areas that are often combined because of how much one affects the other.
2. Emphasize the importance of social & emotional development to children's readiness for school.

National reports and research have shown the importance of social & emotional development in children's readiness for and success in school *(*Bowman, B., Donovan, M. and Burns, M. editors. 2001. *Eager to learn: Educating our preschoolers*.

Washington, D.C.: National Academies Press; Shonkoff, J. and D. Phillips, 2000. *From Neurons to Neighborhoods : The Science of Early Childhood Development.* Washington, D.C: National Academies Press; Zero to Three National Center for Clinical Infant Programs. 1992. *Heart Start: The emotional foundations of school readiness.* Arlington, VA.)

There are a number of social emotional skills these reports identified that children should learn or develop during the preschool years:

- A sense of confidence
- The capacity to develop relationships with peers
- The capacity to concentrate on, and persist in challenging tasks
- The ability to communicate emotions
- The ability to listen to instructions and pay attention

These skills can be thought of as the social & emotional foundations of learning

3. Describe how the pro-social skills, like those listed above, can be taught to children through a variety of methods:
    - **Modeling:** Setting an example through your own behavior
    - **Cueing:** Reminding or prompting children when to use pro-social skills
    - **Coaching:** Direct instructions to children on how to use a skill
    - **Positive reinforcement:** Recognizing children's attempts and successes at using pro-social skills
    - **Making non-judgmental responses:** Avoiding labels of "good" or "bad" when referring to ideas, behavior or people
    - **Role playing:** Creating a safe environment to learn and practice pro-social skills. This might include observing adults role playing, or using puppets or other dramatic play props
    - **Direct feedback:** Asking the child what s/he thinks went well, and what could have been done differently. Offer your own ideas about what went well and what could have been different.

    An example of a social skills curriculum is *Second Step: A Violence Prevention Curriculum*. Seattle: Committee for Children. www.cfchildren.org

4. Introduce the topic of resiliency, risk and protective factors.

    Resiliency refers to the ability to bounce back from adversity, identify the problem, work to address it and move on from it. Emily Werner conducted a landmark study on children's resilience over a span of 30 years in Hawaii. (Werner E.E. and R.S. Smith. 1992. *Vulnerable but invincible: a longitudinal study of resilient children and youth*. New York: Mc Graw Hill.) She found that children with the following attributes were able to overcome hardship and lead successful lives:

    - They were active and sociable infants
    - They had at least one positive adult role model in their life

- They were competent in at least one skill that was admired in their peer group

Risk factors are situations that have a high probability of negatively affecting the way an individual leads his/her life. Examples of risk factors in children are poverty, health or developmental problems, familial conflict or substance abuse; insecure attachments to adults. Risk factors may be within the child, the family, the community, or societal.

Protective factors can override the negative effects of risk factors. Examples of protective factors are good health, easygoing temperament, secure attachments with adults, high level of parental attention and supervision, economic security, access to housing, medical care and nutrition.

High quality early childhood experiences, including early care and education can be protective factors for children at risk. Resiliency can be strengthened through the positive actions of parents, teachers and the community.

An example of a resiliency-based system of curriculum and assessment is the Devereux Early Childhood Assessment Program (DECA), published by the Devereux Foundation.

5. Introduce the concept of emotionally responsive early childhood programs and schools.

   Emotionally responsive preschool environments help children gain the social and emotional development and skills needed to be active and successful learners. When children lack the opportunity to develop in a safe and emotionally responsive environment, they may become distracted and difficult to manage in a group.

   Educators who develop a rhythm of inviting and containing strike a balance between creating an open atmosphere that welcomes expression and one that provides clear limits and boundaries to contain behavior. When the balance is off, there may be so much *expression* that chaos, lack of organization and no clear authority are evident. Alternately when *boundaries* and limits are rigid, children may become explosive, angry, isolated or withdrawn. Competent teachers have many ways to invite and contain children and integrate them within the routines and schedule of the day.

   Educators who see themselves as "partners in development" help each child grow toward personhood in a relationship and environment of trust, security, safety and respect for the child's individual strengths and needs.

Emotionally responsive classrooms are the topic of study reported in Koplow, L. 2002. *Creating schools that heal: Real-life solutions*. New York: Teachers College Press.

What Does Social & Emotional Development Look Like?

What does social & emotional development look like and how might teachers observe it in young children?

Good early childhood education begins with observation. Through observation we understand children's unique strengths, needs and approach to learning, and this helps us individualize the program to meet all children's needs.

Observing children's social and emotional development is both easier and harder than you think. Almost every interaction with and between children has an element of social and emotional development. That's the easy part. As teachers, we are very aware of the behaviors on the surface; behaviors are sometimes endearing and sometimes disruptive. The hard part comes when we try to uncover what is beneath the behaviors, and then how to intervene. Additionally challenging is the fact that as teachers we are all human beings and are drawn to some children more than others. Sometimes we have to work harder to form relationships with the children who need our help the most. This is where systematic observation comes in.

Systematic observation is observing with a purpose. Instead of globally scanning your group to find the children who are engaged, or the area that is brimming with activity, or the area that is getting out of control—and then simply managing the activity, systematic observation calls for a more focused view. It requires you to begin with some observation questions you want to answer. It requires you to think carefully about the children and what or whom you want to know more about. Linking these questions to the learning goals for social and emotional development in the Vermont Early Learning Standards is a good place to start.

- Have participants do *Handout 4: Observation Activity*.
- The instructor can then ask the group to focus on the child it took the longest to remember. Using what has been covered, and the learning goals of social & emotional in the VELS, develop 3-5 questions you would want to answer by doing observations of this child. Where might you observe to answer these questions? What kinds of activity would you want to set up to get answers to your questions? What times of the day would be best to observe to answer these questions?

Reflecting on Social & Emotional Development

This is a time for individuals to reflect upon what has already been explored in the area of social and emotional development as it relates to their own practice. Choose among the following independent writing options:

- How do I as a teacher provide opportunities for children to develop imitative? Self-control? Attachment?
- What do I bring from my own life experiences that influence the way I understand children's social and emotional development?
- Think about the child you didn't remember. What are some ways I might use observation of that child's social and emotional development to strengthen my relationship with him/her?
- Think about the relationships you have with other adults in your program including parents and guardians, specialists, co-workers, supervisors. Look through the children's eyes–How would you describe the messages that your interactions with other adults communicate about these relationships? What are we modeling for children about social and emotional development through the interactions adults have with each other in our program?

The instructor may choose to have a discussion about any of these writing activities.

The Adult's Role in Supporting this Domain

Adults are models for children when it comes to social and emotional health and well-being. The instructor should ask open-ended questions that get participants thinking about this. For example: What are the ways that I fulfill my own social and emotional needs that enable me to be a positive role model for children?

Look at the list on VELS Pg. 9 and reflect on how adults can support children's social and emotional development using one of the activities below:

- Ask each participant to pick one that comes naturally and one that is a struggle for them to do consistently with children. What resources do you have as a teacher to help you overcome your difficulties? Where can you find support?
- Complete the activity described in *Handout 5: Respectful Communication*.

Reflecting on the Role of the Environment

To understand how environments affect children's social and emotional development, it is helpful to think about how a variety of environments we encounter affect our social and emotional well being.

Choose one of the following two options:

- The instructor sets out a number of photographs of different kinds of environments. Use pictures in magazines, calendars, real photographs, travel brochures, posters, etc that evoke many different kinds of responses. Spread these out across the room so participants can walk around to look at them. As they walk, ask them to identify the messages they receive from each kind of environment.
- The instructor asks people to name a store they dislike shopping at. List all the things that make this store unpleasant, that make you want to get out of there as fast as possible. Next correct each feature of the store so that it would make you want to go there more often. Ask how does this help you understand how children feel about program environments?

Next have them imagine their classroom environment. Using *Handout 6: The Environment Worksheet,* have participants identify aspects of their classroom or home environment that send the messages that are central to the learning goals and definitions of the VELS.

Reflecting on the Role of the Adult and the Environment

Instructor remarks should focus on the adults and the environment as two very important factors in an early childhood program that can support children's social and emotional development; if unattended to they can hinder children's development. We always learn and improve by reflecting on our own behavior and assessing our skills.

- Introduce *Handout 7: The Reflective Checklist* from the Devereux Early Childhood Assessment Program. These checklists are self-assessments in the areas of Supportive Interactions; Partnerships with Families; the Daily Program; Activities and Experiences; and the Environment.

Putting It All Together

Have participants create an individualized action plan using *Handout 8: Creating an Action Plan* based on the Reflective Checklist Self Assessment.

The instructor should have participants work with a partner. Partners alternate between being the speaker and supportive listener.

1. Choose the areas that they would like to strengthen or improve the most.
2. Write an action plan that includes the individual learning goals or examples they will focus on; the actions needed to implement, strengthen or improve their practice; resources, both people and things, that can help them; a date by which they will take action; and a means of evaluating whether their action was successful.
3. Emphasize that even if participants feel they are successful in creating a supportive social and emotional environment, they can choose something they would like to do even better.

Conclusion

Ask participants to generate a list of what they have learned over the course of this training. Make sure that the following ideas are included in the summary section:

- The role of the adult in supporting children's social and emotional learning includes not only what we do with children, but how we interact with each other.
- We can strengthen the protective factors that build resiliency in children and families.
- Teachers have the power to directly impact children's social and emotional development.
- Being knowledgeable about observing children and knowing what you are seeing is critical to supporting social and emotional well-being.
- The environment includes the emotional climate of the classroom or program.
- Social and emotional development is related to each of the domains of the VELS. It is the foundation of early learning.

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Handout 1: Modeling an Opening Circle

1. Each child is greeted at the door as they entered the program.
2. The group is gathered in the same meeting place everyday.
3. Each child is recognized individually to start the Opening Circle.
4. The teacher welcomes the group, expressing his/her own enjoyment in seeing everyone, as well as looking forward to being together.
5. An opening song is sung. This same song is repeated EACH DAY. Ideally, the song also has hand motions or sign language to invite physical participation. (The song that is chosen should match the children's developmental interests/skills as well as be inclusive of children who have special needs.)
6. The teacher invites the children to the next activity or period of the day.
7. Match the length of the Circle with the age of the children. Babies can be sung to individually soon after they arrive, or in mixed age groupings while being held during the Circle.
8. Toddlers (not ALL will join the circle, that is permitted) 5 minutes MAXIMUM. For the younger or more active toddler, sing the song individually to the child, soon after arrival. For preschoolers, the MAXIMUM time is 5-10 minutes.
9. The messages of the Opening Circle are:
    - I am glad you are here.
    - I look forward to our day together.
    - You are safe here.
    - You can count on me to understand your needs.
    - You are a valued member of this group.
    - We do fun things together.
    - I enjoy your company.

Handout 2: Opening Circle Songs

Good Morning (Sarah Pirtle)

Good Morning to the sky, sky, sky.
Good Morning to the ground, ground, ground.
Good morning to all the people in the circle, let's take a look around.

The Magic Penny (Traditional)

Love is something, if you give it away,
give it away, give it away,
Love is something if you give it away,
You'll end up having more.
It's just like a magic penny, hold it tight,
and you won't have any.
Lend it, spend it, and you'll have so many,
They roll all over the floor.

Traditional Song

Make new friends, but keep the old,
Some are silver, and the others gold.

The More We Get Together (Traditional)

The more we get together, together, together,
The more we get together,
The happier we'll be.
For your friends are my friends,
And my friends are your friends.
The more we get together the happier we'll be.

Handout 3: Elephants and Giraffes

Necessary Format	Suggested Script
Give instructions for Elephants and Giraffes. Demonstrate examples of: • modeling • cueing • coaching • performance feedback • positive reinforcement	Everyone please move to this open area of the room and form a circle around me, facing inward, and standing about shoulder to shoulder. We are going to do an activity called Elephants and Giraffes. You may have done this before, but we are going to do it with a different twist. Elephants and Giraffes illustrates the different techniques used to teach social skills. Afterwards we will identify several of these techniques and discuss how they apply to successfully teaching social skills. Here's how it works. I'm in the middle, so I'm IT My goal is to get out of the middle of the circle and take one of your places. I'll wander around the circle, point to one of you and call out the name of an animal. The person I point to, together with the person to their right and the person to their left, will make that animal by the time I count to five. If one of the three fails to make his/her part of the animal in time, that person switches places with me and becomes IT. The two animals' names I will call out are elephant or giraffe.
Model the elephant.	First, let's look at the elephant. I'll need a volunteer, someone who will be comfortable modeling for the group to help us see the elephant in action . . . Thanks for helping . . . When I point to you and say, "Elephant, "you bend forward from the waist, not too far because we don't want any back injuries, extend your arms down and outward about one foot from your lower torso, and clasp your hands to make a trunk that looks like this. You try; good. The people on each side of you make big ears, like making the letter "C," with their arms, putting one hand at your shoulder and

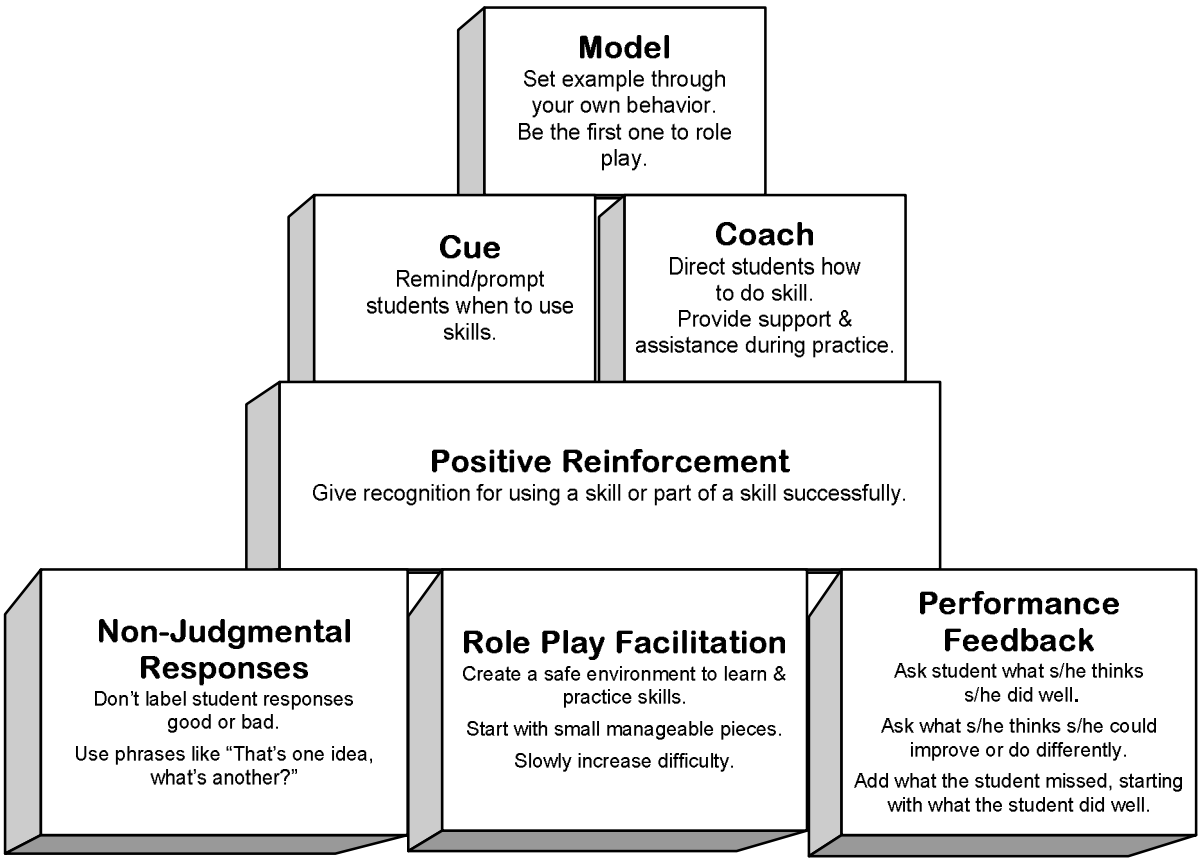
Necessary Format	Suggested Script
	the other hand at your hip, like this. Try that; all right! The three of you have until my count of five to make the elephant. Let's try it once with all the pieces together. I promise to count slowly. Elephant, 1,2,3,4,5! Good job. Thanks!
Model the giraffe	Now let's try the giraffe. I'll need another volunteer. Who will be comfortable modeling for the group to help us see the giraffe? Thanks. We'll do the same thing as before, but with different animal parts. I'm going to point to you and say "Giraffe." When 1 do, you make a long, tall giraffe neck by raising both arms above your head and clasping your hands like this. Try that; good. The people on each side of you make two spots each along the side of your torso by making "O"s with their index fingers and thumbs, like this. No tickling allowed. Try that; good. The three of you have until my count of five to make the giraffe. Let's try it once with all the pieces together. I'll count slowly. Giraffe, 1,2,3,4,5! Great! Thanks.
Coach participants. • Clarify the difference between elephant ears and giraffe spots. • Make sure to clearly select the middle person for each animal. • Remind participants to count to five.	I'll give you a few pointers before we begin. First, there is a clear difference between big elephant ears and small giraffe spots. The elephant ears are like a big "C, "and the spots are little "O"s. Second, when you are IT, make sure to stand about three or four feet in front of the person you point at and say "elephant" or "giraffe." They need to be sure who is being pointed at in order to know who will be the trunk or neck and the ears or spots. Third, remember to count to five. As you get better I will increase the level of difficulty by counting faster and adding a third animal.

Necessary Format	Suggested Script
Ask for questions.	Take a minute to think about my instructions. Are there any questions about how this works?
Lead the activity.	We are ready to begin.
Add the Kangaroo to increase difficulty.	It didn't take long for you to get good at making the elephant and giraffe. Now let's add the kangaroo. The basic concept for making the kangaroo is the same as for the other animals. The middle person makes the pouch by folding his/her hands together and extending both arms out in front of his/her torso, like this. The people on each side make little kangaroo ears by holding up the slightly bent index and middle fingers of one hand next to the ears of the middle person, like this. The person on the right holds up his/her left hand, and the person on the left holds up his/her right hand. In order to complete the kangaroo, all three must do their part while lightly bouncing up and down on the balls of their feet. Of course this must be done before the count of five.
Resume the activity	Let's resume the activity. Remember, we have three animals now, the elephant, the giraffe, and the kangaroo.
Debrief while still in circle. Ask: What are some specific examples of the social skills teaching techniques demonstrated and used during this activity? • modeling • cueing • coaching • performance feedback • breaking the instructions down, then putting it all together • started slow and easy, then increased	Everyone give yourselves a round of applause. You did a great job. Before we return to our seats, let's take a look at what we just did. What are some specific examples of the social skills teaching techniques demonstrated and used during this activity? (Modeled how to make the animals for the group; cued and coached people to count to five after they said "elephant," "giraffe," or "kangaroo," if they forgot; counted with/for them; coached the group to clarify the difference between elephant ears and giraffe spots; coached people on where to stand to most clearly identify the person to be the middle of the

Necessary Format	Suggested Script
the difficulty as people were ready	elephant or the giraffe; gave performance feedback to the volunteers after they demonstrated how to make the animals; provided performance feedback as people made their elephants, giraffes, and kanga-roos: sometimes we would shout, "You just made it" or "Great job!"; modeled the use of think time at the end of the directions to make sure all participants had time to process the information and ask any questions before the activity began; gave the directions in small, easy-to-understand pieces; and slowly increased the difficulty as people were ready.)
Have participants return to their seats.	Let's return to our seats.
Review cueing, coaching, performance feedback, and positive reinforcement, and remind group that the remaining techniques will be covered later in the day.	Let's take a look at the "Social Skills Teaching Techniques" on the next page. You already use many of these techniques with your students during reading, math, PE, on the playground, or in the lunchroom. As we explore the four skill areas of Second Step, you will see how these techniques are applied in teaching the curriculum. You will also practice using them in role-play practice, and identify opportunities when staff can use these social skills teaching techniques to reinforce the use of Second Step skills. This handout will be useful to you during this afternoon's activities.

Social Skills Teaching Techniques

From Second Step Trainer's Manual © 1997 Committee for Children



Handout 4: Observation Activity

Materials

Paper and pencil Copies of the VELS

Room Arrangement

Comfortable seating, preferably with a good writing surface.

Time

15-30 minutes

Goals

- To have participants experience observing children based on memory alone.
- To make a case for systematic observation.
- To introduce the idea of observation questions.

Instructor

Introduces the activity by explaining they will reflect on the children in their groups.

1. Make a list of all the children in your group. Give participants time to do this. Notice how long it takes and if people seem to get stuck as they try to complete the list.
2. Once they finish their lists, have participants write one or two facts they know about each child's social and emotional development, and how they know this is true. Make sure they provide the example that led them to draw a conclusion.
3. Comment on the process completed in Step 2. Ask if anyone had trouble listing everyone in the group. Did they get to the end and struggle to come up with the last two or three children? What is different about the children who come to mind first, and the children who come to mind last?

Note ☞ Instructor can suggest that children who are first on the list stand out because of their behavior, appearance, or a personal connection teachers have with that child. Children who are forgotten or remembered last might be less well known to you. If you are relying on global scanning or your memory to document observations of children, you are missing a lot of information about these children. Similarly, your relationships with these children are probably not as strong.

4. Focus on the child or children you didn't think of right away. Using the VELS, write 3-5 observation questions that will help you focus your observing and get to know these children better.
5. Make an observation action plan. Include the child's name, the observation question, the VELS learning goal or example it relates to, the time of day or area that you are likely to find answers to your questions, and commit to a day or week you will implement this action plan.

Handout 5: Respectful Communication

Materials

Copies of the Communication Scenario

Room Arrangement

Participants sit in a circle in chairs leaving open space in the center of the circle for acting out the scenario.

Time

20 minutes, approximately.

Goals

- To help participants understand what respectful communication sounds and looks like.
- To help participants think about how adults communicate with other adults and with children, and its impact on a child's emotional state developing social/communication skills.

Instructor

- Create small groups of 4 or 5. Use the following scenario or ask the groups to create their own scenarios of adults behaving badly with each other in front of children.

Note ☞ If participants create their own scenario, suggest situations like complaining about the director; bad-mouthing parents or staff; rolling your eyes and other negative body language in response to a co-worker's statement; or becoming angry with parents who are late to pick up their children.

- Have at least two people take on a role and act out the scenario. Have one or two observers pretend they are children. What messages did the observers get about social and emotional development by witnessing this scene?
- The instructor reads aloud the communication scenario and asks participants to listen to the ways the early educators are NOT using respectful communication. Further, the instructor asks participants to think about how they could change the scenario in order to better reflect respectful, supportive, and positive communication.
- The instructor should comment on the fact that we are always sending messages of one kind or another to children from our own behavior, especially when it comes to social and emotional issues.
- Next, the instructor should guide a discussion about how the scenario could be changed to better reflect respectful communication.
- If time allows, have the groups do the role-play again, this time changing the scenario so that the people involved are intentional about how they interact with one another, using respectful communication to support the kind of social and emotional development we want to promote with children. Participants can

offer suggestions during the role play so that it becomes a group project with all helping to change the scenario. The instructor sums up the key guidelines for respectful communication and helps the participants see the connection to a child's social and emotional development.

Communication Scenario

Setting	Early childhood setting during snack or lunch time (family childcare or center).
Players	
Teachers 1 and 2	Talking to each other
Teacher 3	Talking to four different children
Teacher 4	Talking to a parent.

Scenario

Teacher 1	(Standing at the counter, preparing food, talking to Teacher 2) "You know, it drives me crazy that I am having to always wash Teacher 3 coffee cup," (frustrated tone while making a racket washing dishes and preparing food).
Teacher 2	" Yeah, I know what you mean, how about when she blames us for messes she makes, (disgruntled tone)?"
Teacher 1	"You know, I don't know how much longer I can take her stuck up attitude (voice rising)."
	(Parent arrives at the door to interrupt this conversation between Teacher 1 and 2. Parent stands looking at the meal time scene, before being greeted by Teacher 4.)
Teacher 3:	(to a 10 month old in a high chair) "Sally, how many times have I told you not to drop your spoon? I am tired of picking it up for you, (Teacher 3 sighs)"
Teacher 3	Says the following to a toddler, standing over him while he sits at the table, pushing his/her food away: "Billy, I don't want to go through this again, you know you have to eat to be a big and strong boy. I won't let you waste any more food today." (Toddler starts to whine and cry.) "Look at Yashim. He is eating everything on HIS plate."
Teacher 3	Says to a preschooler: "Dahlia, how many times do I have to tell you, use an inside voice. If I have to tell you again, maybe you need to go to Time Out to be reminded, only inside voices inside!" (Joni says something with a softer voice.) "Good girl."
Teacher 3	Says to another preschooler: "Bobby, be my little helper and throw all the cups away for me, and don't forget to use your walking feet." (Bobby complies.) "Good job."
Teacher 4	Approaches the parent who has been standing by the door looking uncomfortable for almost 10 minutes.)
	"Oh, I just noticed you were here. We get so busy...."
	Parent (seeming shy and embarrassed): "I forgot to bring Kamili's lunch, here it is (hands lunch box to Teacher 4)

Teacher 4 "Oh yeah, you also forgot last week. Oh, and by the way, Kamili has been doing a lot of hitting lately. Could you talk to her about that, we are feeling at loose ends with her sometimes. Just yesterday, she had to stay in Time Out for the entire recess period, because of her constant hitting."

Parent mumbles something and dashes quickly out of the door.

Handout 6: Environmental Worksheet

Message	*Aspects of my home/classroom environment that supports this message*
Sometimes I just want to be alone.	
I know I'm important in this place.	
The people in this place like my home and family, too.	
I love my mommy/daddy so much I want to be like her/him.	
I am proud of my abilities and accomplishments.	
I care about this place and want to take care of it.	
I want to be friends with the children I know here.	
I'm figuring out how to get what I want without making my friends scared or angry.	
I want to be able to swing as high as he can.	
I think I can help other children get their snowsuits on.	

Handout 7: Reflective Checklist (Self-assessment)

Reflective Checklist for Supportive Interactions

Teacher _____ Date_____

	Yes	Not Yet
1. Help children learn the skills and behaviors used to play and learn with others.		
2. Maintain realistic expectations for children's behavior that match individual and developmental characteristics.		
3. Involve children in setting a few important rules and guidelines.		
4. Give each child the opportunity to build a trusting relationship with a caring adult.		
5. Support children's growing independence and competence.		
6. Help children understand their feelings and those of others.		
7. Tailor positive guidance strategies to fit the child and the situation.		

Reflective Checklist for Partnerships with Families

Teacher _____ Date _____

	Yes	Not Yet
1. Learn about each child's family, culture, and community.		
2. Use children's home languages at the program.		
3. Establish an ongoing system for exchanging information about each child with his or her family.		
4. Give families information about typical developmental skills and behaviors of children.		
5. Use a variety of communication strategies to keep families informed about the program.		
6. Incorporate family involvement in the program design.		
7. Reduce and/or avoid adding to a family's stress.		
8. Support each child's relationship and connection with all nurturing family members, as legally appropriate.		

Reflective Checklist for the Daily Program

Teacher _____ Date_____

	Yes	Not Yet
1. Maintain a predictable and consistent schedule.		
2. Adjust the schedule when appropriate to respond to children and circumstances.		
3. Provide time to expend energy and time to relax.		
4. Offer indoor and outdoor choice times several times each day.		
5. Include enough time for routines and transitions.		
6. Plan a consistent approach for carrying out group routines.		
7. Follow an individualized approach for carrying out personal routines.		
8. Provide advance notice of transitions and explain what happens next.		
9. Use an individualized approach during transitions.		
10. Help children and families cope with separation at arrival and reunions at the end of the day.		

Reflective Checklist for Activities and Experiences

Teacher _____ Date_____

	Yes	Not Yet
1. Divide the class in half for meetings, story time, and other group events.		
2. Plan and lead a few small group activities during choice time.		
3. Make small group activities open-ended to reflect a range of skills and interests.		
4. Read and discuss books about feelings with the group and with individuals.		
5. Encourage children to initiate their own activities, alone or with others.		
6. Teach children relaxation techniques.		
7. Offer activities and experiences that encourage cooperation.		
8. Offer physical activities that use large muscles and expend energy.		
9. Provide many opportunities for children to build language skills.		
10. Teach children problem solving skills and encourage them to use their skills to resolve conflicts.		

Reflective Checklist for the Environment

Teacher _____ Date_____

	Yes	Not Yet
1. Set up well-stocked interest areas that reflect children's current skills and interests.		
2. Establish clear traffic paths and boundaries around interest areas.		
3. Display toys and materials on low, open shelves within children's reach.		
4. Create a simple system to limit the number of children who can use an area at one time.		
5. Provide a few be-by-myself spaces that are private, but still visible to teachers.		
6. Provide storage areas (a shelf or cupboard) to keep and protect unfinished projects.		
7. Provide space to store and display individual work and belongings.		
8. Include in the classroom arrangement a large area for meetings, read-aloud sessions, and music and movement activities.		
9. Maintain a soothing & relaxing atmosphere with appropriate noise and activity levels.		
10. Create a home-like atmosphere that reflects children's families, cultures, and home languages.		
11. Include a range of open-ended materials, from simple to complex, that offer different levels of challenge.		
12. Include items that support children's development of a sense of self.		
13. Provide materials that promote cooperation and group play.		
14. Offer materials that encourage children to explore & express their feelings.		
15. Provide materials that accommodate a range of dramatic play skills.		
16. Provide material, equipment, & space for indoor gross motor play.		
17. Offer duplicates of favorite items.		
18. Include supplies & equipment for personal care & clean-up.		

Handout 8: Creating an Action Plan

Area of practice I want to strengthen or improve	*Action I will take*	*Resources (people and things) that can help me*	*By when*	*How I will know I'm successful*

Social & Emotional Development Professional Resources

Baker, A.C., & L.A Manfredi-Petitt. 2004. *Relationships, the heart of quality care: Creating community among adults in early care settings.* Washington, DC: NAEYC.

Bowman, B., Donovan, M. and Burns, M. editors. 2001. *Eager to learn: Educating our preschoolers.* Washington, D.C.: National Academies Press.

Koplow, L. 2002. *Creating schools that heal: Real-life solutions.* New York: Teachers College Press.

National Association for the Education of Young Children. *Preventing and responding to behaviors that challenge children and adults.* 2003. Young Children 58 (4): entire issue.

Novick, R. 2002. *Nurturing emotional literacy.* Young Children 57 (3): 84-89.

Shonkoff, J. and D. Phillips, 2000. *From Neurons to Neighborhoods : The Science of Early Childhood Development.* Washington, D.C: National Academies Press.

Weinrab, M.L. 1997. *Be a resiliency mentor: You may be a lifesaver for a high-risk child.* Young Children 52 (2) 14-20.

Werner E.E. and R.S. Smith. 1992. *Vulnerable but invincible: a longitudinal study of resilient children and youth.* New York: Mc Graw Hill.

Zero to Three National Center for Clinical Infant Programs. 1992. *Heart Start: The emotional foundations of school readiness.* Arlington, VA.

Websites

Center on the Social and Emotional Foundations for Early Learning, http://www.csefel.uiuc.edu/

Devereux Early Childhood Assessment Program, Devereux Foundation, http://www.devereuxearlychildhood.org/resources.html

Second Step: A Violence Prevention Curriculum, http://www.cfchildren.org/ssf/ssindex/

Supplemental Material

June 2005

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Module 3: Language, Literacy & Communication

Materials Needed

- Copies of VELS
- Handouts
- Videotape and VCR (optional)
- Overhead Projector (optional)
- M & Ms (optional)
- Age-appropriate picture book
- Poster board and game cards
- Flip chart, tape, and markers

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Understand the learning goals and definitions in the domain of Language, literacy & communication	Teaching and Learning Child Development Health and Safety
Understand the differences and connections between language, literacy & communication	Teaching and Learning
Understand the development of language, literacy & communication in the context of continuous, responsive, and consistent relationships with significant others	Child Development Teaching and Learning
Understand the process of literacy development in young children and how it may be affected by individual variations, such as being a new English language learner, or having special learning needs or disabilities	Child Development
Understand how to support young children's daily language, literacy & communication through developmentally appropriate practices	Teaching and Learning Health and Safety
Increase skills in observing and interpreting language, literacy & communication in young children	Teaching and Learning
Become familiar with professional resources and current research in the area of young children's language, literacy & communication	Professionalism and Program Organization
Increase skills and knowledge of how to explain young children's language, literacy & communication to others, especially parents, guardians, co-workers and colleagues	Professionalism and Program Organization Family and Community

Module 3: Language, Literacy & Communication

Note Page references to the Language, Literacy & Communication domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg 20. Relevant pages for this module are 10-13, 26, and 30.

Introductions and Opening Activity

- Make sure participants know one another and the instructor, including pertinent information about their work and work settings.
- Choose an opening activity from the following options:
  - *Handout 1: Where are the Early Literacy Activities Here? (Small group)*
  - *Handout 2: First Memories (Individual/Pairs)*
  - *Handout 3: Alphabet Hunt (Small group)*
  - *Handouts 4-6: Wingding Nametags (Large Group)*

Review the Standard and Domain

- The instructor should review the Language, Literacy & Communication section of the VELS, pages 10-13. Take notice of the introduction; explanation of the domain; learning goals and definitions; examples; correlation to Vermont Frameworks and Head Start outcomes; role of the adult; and the role of the environment.
- Acknowledge that there are many opportunities throughout a typical day to support children's development of language, literacy & communication, both at home and in programs. These opportunities come about through relationships with others. Language, literacy & communication can't be considered separately from the relationships a child has with adults and other children.
- Acknowledge that participants already know a lot about supporting a child's development in language, literacy & communication as a lead in to the next learning activity.
- Review the learning goals one by one. Ask participants to recall the events of their day with children, and as you are speaking, use their examples to illustrate each learning goal.
- Review what language, literacy & communication looks like, feels like, and sounds like in early childhood settings. Use *Handouts 7-10: Give One, Get One*.

The Development of Language, Literacy & Communication

Instructors should refer to the introduction in VELS, Pg.10 for a concise background to Language, Literacy & Communication and the following key points to develop a mini-lecture on the topic of language, literacy & communication:

Language, literacy & communication can be broken apart and treated as separate and distinct topics. The VELS chooses to present them together to emphasize that expressing and understanding language, in all its various forms, is primarily a way to

communicate thoughts, feelings and ideas with others. Literacy usually refers to communication through text, involving reading, writing and understanding.

Some language theorists propose that humans are predisposed to learn language because of innate abilities, and this is what sets us apart from plants and animals. Others point out that language development is stimulated and enriched by contact with our environment and others who use language. Most language theorists now believe that it is a combination of innate predispositions and a language-rich environment that helps humans acquire language. (Refer to Chomsky, N., & M. Ronat. On language: Chomsky's classic works language and responsibility and reflections on language. New York: The New Press, 1998 for more in-depth background material.)

- Literacy learning begins at birth. Recent research has corrected myths we previously held about the ideal age to expose children to books or to teach children to read. The more experiences children have with oral language, books and communication before they enter formal school, the better equipped they are to learn to read.
- Oral language is the foundation of children's language and literacy development. Oral language consists of a varied vocabulary, extended discourse (conversations), and stimulating environments at home and school. (See Dickinson, D., and P. Tabors, eds. Beginning literacy with language: Young children learning at home and school. Baltimore: Paul H. Brookes Publishing Co., 2001)
- Language development consists of speaking and communicating (expressive language) and listening and understanding (receptive language).

There are predictable stages in the sequence of children's expressive language development. Generally, babies coo, and then make consonant sounds, then string those together to babble before producing a first word. Later they put two words together, and still later, construct sentences. (For more information, see "Language and Communication Development: Widely held expectations", in Bredekamp, S., & C. Copple, eds. Developmentally appropriate practice in early childhood programs, revised edition. Washington, DC: NAEYC, 1997. The sequence may be delayed for children who are learning English as their second language, or for children with special needs.

- The quantity of language children experience makes a difference in their vocabulary development. The more words a they hear, the bigger their vocabulary. Children from higher socioeconomic homes hear roughly three times the amount of words than do children from homes in poverty. (For more information see the article entitled "The Early Catastrophe on Page 87.) Children who are exposed to a rich and varied vocabulary through meaningful conversations learn the words they will need to understand later, when they begin to read.
- Reading books with young children is a major part of children's emergent literacy. Shared-book reading involves not only reading the words and showing the pictures; it includes having discussions about the story, characters, and pictures, and asking and answering related questions. Shared-book reading is also called dialogic reading. During dialogic reading, children have opportunities for vocabulary development and knowledge acquisition.

- Phonological awareness is the awareness that words are made up of sounds – beginning sounds, ending sounds, rhymes, and syllables or word parts. Phonemic awareness is a sub-category of phonological awareness and refers to individual letter sounds. (For more information see the article entitled "Sounds of Language" on Page 83.)

What Do Language, Literacy & Communication Look Like?

What do Language, literacy & communication look like and how might teachers observe it in young children? Choose from among the following learning activities:

- Select a short video clip of children playing. Ask participants to identify elements of language, literacy & communication that they observe. Instruct them to use the language of the VELS as much as possible. For each example observed, link it back to the relevant learning goal(s) .
- Handouts 11-12: Language Literacy and Communication Board Game.
- Handout 13: Stages of Communication.

Reflecting on Language, Literacy & Communication

Independent writing activity question–choose from among the following:

- Select a thought or concept from today's workshop that has you thinking about something you haven't considered before. What do you want to know more about?
- Fill in the blank: My strength as a teacher of language, literacy & communication is _____.
- Select a concept presented today that you don't agree with and explain why.

The instructor can decide whether to ask participants to share their reflections or keep them private.

The Adult's Role in Supporting this Domain

Shared book reading can be a powerful activity to promote early literacy, language development and communication skills. Adults develop their unique book-reading style, but certain elements of reading aloud promote children's emergent literacy skills more than others. Use one or both of these activities to explore the adult's role.

- *Handout 14: Model Read-Aloud*
- *Handout 15: Reading Picture Books to Young Children*

The Role of the Environment in Supporting this Domain

Home and classroom environments can be a great support to children's developing language, literacy & communication. Are books available in an inviting area? Are writing materials easily accessible for both creative and communication purposes? Is print used to convey ideas and messages throughout the indoor and outdoor spaces?

Remind the participants that environment is defined as the combination of room arrangement, selection and display of materials and equipment, learning centers, a predictable schedule, caregiving routines that take place both inside the classroom or home and outdoors as well.

Activity: What Are the Children Doing?

1. Use the Sandra Stone cartoon found at the end of this module.
2. In groups of three, have participants note 3-5 changes they could make to the environment in each learning area contained in the cartoon to promote children's language, literacy & communication development.
3. Make sure they address more than one aspect of the environment mentioned above.

- Use *Handout 16: A Environmental Scan for Literacy Materials*.

Reflecting On the Role of the Adult and the Environment

Research shows that a language and print-rich environment is a critical element of what young children need to build a foundation for success as readers. However, what is even more important are interactions with adults who speak with children frequently, have extended conversations and use a varied vocabulary. Here is an opportunity to reflect through a child's eyes on the opportunities your program provides to build this solid foundation for language, literacy & communication.

- Use *Handout 17: Though a Child's Eyes*.

Putting It All Together

Choose among the following options for this exercise:

- **What's in Your Portfolio?:** Imagine you were creating a language, literacy & communication portfolio to take with you on an interview for Literacy Teacher of the Year. The interview panel is made up of sixth graders who were in your preschool class when they were three and four years old. You use your portfolio to demonstrate how you supported their development in language, literacy & communication. Describe the following pretend pages: all-time favorite books; my philosophy of early literacy; top five best activities that promote language, literacy & communication. (Individual)
- **Language, Literacy & Communication Gazette:** A reporter is interviewing you for an article on the importance of language, literacy & communication in the preschool years. What are the top five points you want to make sure she understands before she writes this article? (Small group)
- **Advice to Parents:** A parent asks you what he can do to help his child learn to read. Create an answer for this parent that includes interactions, activities and materials that will set the stage for reading success. (Small group)
- **Language, Literacy & Communications Mini-grant:** You can apply for a $400 grant to purchase materials to support your language, literacy & communication curriculum. What would you buy and why? (Individual)

Conclusion

Instructor's final key points should include the following points to summarize the material in this module.

- Adult-child interactions are key to providing a solid foundation of success in language, literacy & communication. Relationships are key because without others to communicate with, language is without a purpose.
- The reason we concentrate on children's language, literacy & communication is to help them develop a joy and love of reading, not just to teach the skills of literacy.
- Early experiences with language, literacy & communication are important. Home environments and early childhood programs offer many opportunities to provide experiences that build a love of words and communication.

Handout 1: What are the Early Literacy Opportunities Here?

Materials

None

Room Arrangement

Allows small groups to work together

Time

30 minutes

Goal

Participants recognize opportunities in the daily schedule to support early literacy that are not just during formal teacher-directed activities. Participants become more familiar with the language, literacy & communication domain of the VELS.

Instructor

1. Read the following vignette to the whole group: (Make copies of this vignette from the text on the next page.)

   > "A family child care provider is greeting families by the front door in the morning. A mother arrives with her four year old son. The mother tells the educator that her son was telling her a story in the car about a yellow school bus that the child had seen with the educator on a field trip the previous day. Another child, age three, sits on the bench and starts taking off her boots. A toddler starts pulling at his hat and crying."

2. Divide participants into small groups of three to four people.
3. Reread the vignette above and this time look for the possibilities and opportunities for the family child care provider to make the most of language, literacy & communication. What is happening in this vignette that might be a stepping-stone to language, literacy & communication learning?
4. The instructor should help participants in creating a comprehensive list of the ways the teacher could use the possibilities in this short scene to make the most of language, literacy & communication. How could these be used at other times of the day like mealtimes, toileting, outside play, dressing and transitions?

Early Literacy Opportunities Vignette

A family child care provider is greeting families by the front door in the morning. A mother arrives with her four year old son. The mother tells the educator that her son was telling her a story in the car about a yellow school bus that the child had seen with the educator on a field trip the previous day. Another child, age three, sits on the bench and starts taking off her boots. A toddler starts pulling at his hat and crying.

Handout 2: First Memories

Materials

Multi-colored M & M's; overhead projector with transparency OR flip chart paper with the instructions below.

Room Arrangement

Any arrangement will work.

Time

Approximately two minutes per person.

Goal

To have all participants recall something about their own life experience related to learning language, literacy & communication.

Instructor

The instructor passes around a container with M&M candies, and tells participants to take one in their favorite color. When everyone has a candy, the instructor says:

> "Look at the color of your M&M. Here are some questions to answer depending on the color of your candy."

If you have...	*Recall an experience in your past...*
Red	when you tried to communicate something to someone but couldn't
Green	when you were read to as a child
Yellow	when you told a story, or someone told you a story
Brown	when you learned to write, or first expressed yourself in writing
Orange	when you first learned the alphabet
Blue	with a special book that you remember for a particular reason

Participants can reflect for a minute and then write their response on a piece of paper. Have participants share their responses with a partner. Organize participants into one large group after each partner has had an opportunity to share; and ask if anyone would like to share with the group.

The purpose of this is to put everyone in a learner's frame of mind. It is also to generate upbeat memories about language, literacy & communication.

Handout 3: Alphabet Hunt

Materials

None

Room Arrangement

Allows people to move around and into small groups.

Time

15 minutes

Goal

Participants learn the importance of communication and teamwork.

Instructor

1. Make sure everyone can see and hear you. Tell participants:

   > "We are going to have an alphabet hunt. It is very important that you listen to and follow the directions. On your own, without talking to anyone else, I would like you to make a list of things that are either *in this room or on your person* that start with each letter of the alphabet. Don't start yet. Does everyone understand the directions? Okay, then begin."

2. After one minute, stop the group and divide them into pairs. Now, tell participants:

   > "Now, without talking, I'd like you and a partner to continue building your alphabet lists."

3. After one minute, stop the group again. Now, say:

   > "Now you can talk, but only with your partners. Continue building your list for another minute."

4. Allow the groups to work for about one more minute and then stop them. Tell them that they can go around to other groups and finish off their lists by working as a large group.

5. When the groups have finished their lists, have a discussion about the activity. Some questions you might ask: What was hardest about this activity? What was easiest? Why? Was it harder to work on your own or talking with a partner? Why? How did you and your partner communicate when you couldn't talk? How did you remember what was on your lists?

Handout 4: Wingding Name Tags

Materials

Participant's names typed on labels in the Wingding font on a computer. (Make sure that you have selected the Wingding font before typing first names only with the CAPS LOCK key on.)

Decoding Strategies chart

Post-its (optional)

Copy of Wingding alphabet (*Handout 5*)

Wingding answer sheet-list of names and Wingding translation (see examples)

Room Arrangement

Place nametags on large table prior to arrival of participants.

Time

15-20 minutes

Goal

To simulate the child's early experiences with print and decoding.

Instructor

1. The instructor should state the following at the beginning of this activity.

   > "Welcome to our presentation today. In an attempt to simulate a "first day of school" experience for many children, I want you to go find your nametag and then sit down. By the way, your name is written in Wingding."

2. Participants will be reluctant and request further directions/help etc.
3. The instructor can give this additional information:

   > "Remember that I stated that we are simulating how a child might feel or approach this task. What can you do right now to help you determine which nametag is yours?"

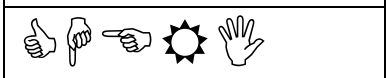
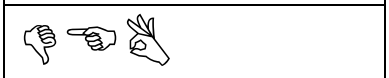
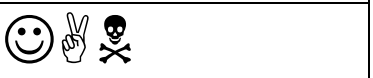
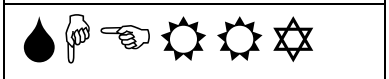
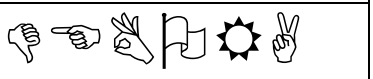
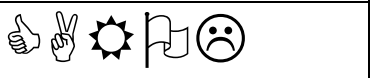
4. Participants will start to get the idea that they need to talk with each other, look for patterns etc. When they ask for help, direct them to their peers to problem solve together.
5. Once everyone has a nametag, ask folks to turn and talk to a partner about the strategies that they used to figure out the name.
6. Participants then write a strategy on a "post-it". One representative from the pair is asked to place the post-it on the Decoding Strategies chart. The participant reads the strategy aloud as the post-it is placed on the chart. (An alternative to the post it idea is simply to ask folks to share and the instructor records responses on chart).

7. The instructor concludes by summarizing some of the strategies. Typically some strategies are:
    - ? Looking for letter patterns
    - ? Counting letters
    - ? Comparing beginning and ending letters with peers
    - ? Waiting and watching others
8. Conclude the activity by asking participants to reflect on how this activity made them feel? How does this compare to early experiences that young children have with print?

Handout 5: Wingding Alphabet

	A		N
	B		O
	C		P
	D		Q
	E		R
	F		S
	G		T
	H		U
	I		V
	J		W
	K		X
	L		Y
	M		Z

Handout 6: Wingding Alphabet Nametag Samples

CATHY	
REBECCA	
KIM	
CHERI	
CONNIE	
DEB	
JAN	
SANDY	
SHERRY	
DEBORA	
ELLEN	
CAROL	
LORI	
DONNA	
BETH	

Handout 7: Give One-Get One Instructions

Materials

Give One–Get One handouts (*Handouts 8, 9, & 10*)

Room Arrangement

Any seating arrangement with room to stand up and mingle.

Time

15 minutes

Goal

To have all participants tap into prior literacy knowledge; collaborate with peers compare/contrast to VELS document.

Instructor

1. The instructor passes out the directions (*Handout 8: Give One-Get One, Part B*) and reviews them with participants. *Handouts 9 & 10* are variations on this activity.
2. Give participants 5 minutes to walk around and share answers. Return to seats.
3. Open the VELS and compare/contrast the results with the examples on pages 10-13.
4. Give participants an opportunity to talk in pairs and answer the question "What did you notice about your results and the literacy examples in the VELS?".
5. Draw the group back together after each partner has had an opportunity to share; and ask if anyone would like to share with the group.

Handout 8: Give One-Get One, Part B

1. Using 3 boxes below, jot down 3 examples of what language, literacy & communication may look like, feel like and/or sound like in Pre-k setting.
2. When you have 3 ideas written, stand up to show you're ready. Look for others who are ready. Give one of your ideas to someone else and get one from him or her.
3. Go to 6 different people and get 6 different ideas for the 6 remaining boxes. When you are finished, sit down and get ready to share one with the class.

Handout 9: Give One-Get One, Part C

1. Using three boxes below, jot down 3 examples of what language, literacy & communication may look like, feel like and/or sound like in pre-k setting.
2. When you have three ideas written, stand up to show you're ready. Look for others who are ready. Give one of your ideas to someone else and get one from him or her.
3. You will have five minutes to collect ideas from others. When the time is up, sit down and get ready to share one with the class.

Language	Literacy	Communication

Handout 10: Give One-Get One, Part D

1. Using three boxes below, jot down 3 examples of what language, literacy & communication may look like, feel like and/or sound like in pre-k setting.
2. When you have three ideas written, stand up to show you're ready. Look for others who are ready. Give one of your ideas to someone else and get one from him or her.
3. Go to five different people and get 5 different ideas for the remaining boxes. When you are finished, sit down and get ready to share one with the class.

Language	Literacy	Communication

Handout 11: Language, Literacy & Communication Board Game

Materials

Game boards need to be assembled prior to workshop

Copies of the VELS

Large poster board in several colors to make one game board per four students

Glue

See *Handout 12: Language, Literacy & Communication Board Game Cards* for templates of Language, Literacy & Communication Standards headings and sample cards to cut up for classroom scenarios.

Note

To make the game pieces, follow these directions:

1. Cut up the template.
2. Glue headings onto poster board.
3. Photocopy scenarios onto cardstock and cut up into cards. (It helps to color code sets of cards to stay organized during clean up.)
4. Make a full set of heading and scenario cards for each group of four.

Room Arrangement

Participants can set game boards on tables or on the floor around the room.

Time

15 minutes minimum

Goal

To have all participants relate classroom literacy scenarios to VELS standards and examples.

Instructor

1. Explain to participants that you want them to get some hands on experience with the Language, Literacy & Communication standards and examples. In order to do this they will play a game with a small group.
2. Using the VELS, work together as a group to determine which scenario goes with which standard. (Most groups comment that there is a lot of overlapping)
3. Place the scenario card under the correct standard heading. When groups are finished they can walk around to notice the game boards of other groups.
4. Come back together as a group. Ask, “What did you notice?” “Was this helpful?” “What questions do you have about the Language, Literacy & Communication standards?” “Could you relate the scenarios to your literacy environment?”

Handout 12: Language, Literacy & Communication Board Game Cards

Learning Goal 1 - Play

Children engage in play as a means to develop their receptive and expressive language skills

Tim is hiding under a bench while Jennifer, Harold, Samara are taking turns walking over it shouting “TRIP, TRAP!”	Annie put up a sign in the block area to label her structure.

Learning Goal 2 - Listening and Understanding:

Children develop skills in listening and in understanding language.

Children line up at the sink, wash their hands get their snack from their cubby and sit down for snack.	Annie is singing a lullaby to her baby doll as she feeds her a bottle.

Justin smiles at Laura as she shares her story about her birthday party.	

Learning Goal 3 - Speaking and Communicating

Children will use verbal and non-verbal language to express and to communicate information.

Emily greets the principal when she arrives at classroom door.	Billy pushes Andy while waiting for a drink of water. Andy tells Billy to stop because it hurts to be pushed.

Learning Goal 4 - Vocabulary

Children will acquire and use new words to increase their understanding and express ideas.

You've been singing 5 green and speckled frogs every day this week. During center time, Allie tells you that her shirt got "speckled" while she was painting.	Jose is excited to tell you that he saw a green chrysalis with a gold ring around the top on some milkweed on the playground.

Learning Goal 5 - Early Writing

Children demonstrate an interest in and ability to use symbols to represent words and ideas.

Ali is in the housekeeping area. She is on the telephone and scribbles on a pad as she "talks".	Sam is walking around with a clipboard and marker. He is inviting classmates to join his club by signing their name.

Learning Goal 6 - Early Reading

A. Phonemic and Phonological Awareness: Learning that the language is comprised of distinct sounds and the combination of these sounds; discriminating sound and sound patterns.

At snack time the children are getting silly by making up rhyming words to go with the food. Alan says "apple/ tapple/sapple" Sean says "juice/poose/ moose"!	After singing Miss Mary Mack, Shayna says, "hey that song's just like Jack".

Learning Goal 6 - Early Reading

B. Book Knowledge and Appreciation: Understanding and appreciating that books and other forms of print have a purpose.

Learning Goal 6 - Early Reading

C. Print Awareness and Concepts: Recognizing the association between spoken and written words by following print as it is read aloud.

Haley notices that her name begins the same way as Hunter.	Jack brings you a marker and paper and says, "make us an EXIT sign".

Learning Goal 6 - Early Reading

D. Alphabet Knowledge: Recognizing that symbols are associated with letters of the alphabet and that they form words.

Sara and Emily are sitting on the floor with the big book, Mrs. Washy Washy. They are pointing to the bottom of the page and laughing as they "read" the story of the animals jumping in the mud. They recite "wishy-washy, wishy-washy" when the animals are in the tub.	At snack time, Jack reads the word "Cheerios" off his small box of cereal. Mary reads "McDonalds" on the bag that her mom used for snack.
While playing in the rice table, David reads the word, "COOL WHIP" on the side of the plastic container. Colin says, "My name looks like that word too.	Brian is in the dramatic play area that is set up like a restaurant. He is reading the menu and gives his order to Nora. She scribbles on a pad.

Murphy arrives at school eager to show off the “word” on his new shirt. He announces to everyone that it says, “SPIDERMAN”	

Handout 13: Stages of Communication – Speaking

Materials

Strips of paper or note cards with the individual stages of language listed separately (See next page for list of stages).

Room Arrangement

Participants can work first in pairs or small groups.

Time

15 minutes minimum

Goal

To have all participants identify and order the typical progression of verbal language in young children.

Instructor

1. Once partners are seated near one another, the instructor says:

   > "There is a universal way in which children develop their language skills. On these separate strips of paper are listed the different stages. Place them in order from first stage to last. Then, if you want, try to think about approximate ages when these might occur. I'll give you about 5-8 minutes."

2. After time has lapsed, the instructor asks if there is a group that would like to share their order. Once this is done correctly, ask the entire group if they would like to guess about when these might appear in children's development.

3. Key:

   Crying (0-1 month)

   Cooing (1-3 months)

   Babbling (6 months)

   Holophrases (First Words / One word sentences) (10-20 months)

   Two Word Sentences (18 months)

   4 – 5 Word Sentences (30-36 months)

   Over-Regularization (go-ed, throw-ed) (36-48 months)

   Adult-like Language (5 years)

4. Possible follow-up discussion topics may include:

   Individual variation in development

   Ways parents and professionals can support development

   Research

   Determining when you should become concerned about possibly difficulties

Labels for paper strips or note cards (copy this page and cut out individual labels):

Crying
Cooing
Babbling
Holophrases (First Words/ One Word Sentences)
Two Word Sentences

4 – 5 Word Sentences
Over-Regularization (go-ed, throw-ed)
Adult-Like Language

Handout 14: A Model Read-Aloud

Materials

Short but age-appropriate picture book for three and four year olds

Handout 15: Reading Picture Books to Children for each participant

Room Arrangement

Instructor positions her/himself so that everyone can hear see the book.

Time

Approximately 30 minutes

Goal

To identify the elements of an effective read aloud; to compare with an ineffective read-aloud

Instructor

1. Make sure everyone can see and hear you. Tell the participants:

   "I am going to read you a book I might read to a group of preschoolers. I need some volunteers to play the role of children listening to this story, who will act like children, but who will not disrupt the flow of this activity, (even though some children you know might)."

2. The participants observing this scenario take notes on the language, literacy & communication they see in the read-aloud, using the language of the VELS as much as possible.

3. Based on the scenario, have participants complete the Reading Picture Books to Children checklist in pairs. The instructor can lead a group discussion on what they saw, and the results of the checklist.

An optional approach is to first do an ineffective read-aloud, exaggerating the wrong way to read books to children. Skip Step 2. Have participants fill out the checklist. Then repeat the reading, this time presenting it as a model of how books should be read to children. Have participants fill out the checklist again.

Instructors should make sure they are familiar with the checklist before attempting this activity. Instructors should emphasize *intentionality*. Having a purpose in reading to children, and knowing how reading aloud can benefit children's growing language, literacy & communication skills makes this an effective and worthwhile activity. Pulling a random book off the shelf or using reading as simply a classroom management technique is not recommended.

The instructor should not try to present a perfect read-aloud. Make sure there is an opportunity for participants to identify elements they did not observe happening, but would want to observe in a really good example of reading a book to children.

Handout 15: Reading Picture Books to Young Children Checklist

Professional Development Assessment

In the Critical Task Area: Reading Picture Books to Young Children

Quarterly observations are encouraged in order to demonstrate competence in the multiple tasks listed below. The behaviors in Selecting the Book, Setting the Stage, Reading the Book, and After Reading the Book should be demonstrated every time a book is read aloud to young children. At any given reading, at least some other literacy and language techniques in Section 5 ought to be demonstrated.

Early Childhood Professionals being observed should be rated at one of three levels:

1. Beginning, 2. Improving, or 3. Mastering. The observer may wish to expand on their rating with a comment or using the space at the end of this form. The enclosed Longitudinal Checklist can be used for more comprehensive, ongoing observation, and self-assessment.

Vermont Child Care Apprenticeship Program

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Observation #:_____ Date:_____

Observer (full name and title): _____

_____

Teacher being observed (full name and title): _____

_____

Ages of children in the group:_____ Number of children in the group: _____

Time period of observation:

Total number of minutes:_____ Is this the first time reading this book to this group?:_____

Title of book read during observation: _____

_____

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Module 3: Language, Literacy & Communication

I. Selecting the Book

		Criteria being observed	Comments
a.		Book is reflective of racial, ethnic, language, socio-economic, ability, gender, age, religious or geographic diversity. *CDA training area 3.*	
b.		Book is age appropriate. *CDA training area 8.*	

II. Setting the Stage

		Criteria being observed	Comments
a.		The reader assesses children's prior knowledge by asking open-ended questions about the book's topic. *CDA training area 2.*	
b.		The reader asks open-ended questions about the book's cover help to introduce the book. *CDA training area 2.*	
c.		The reader connects the book to other books, children's experiences and/or to current classroom study topics. *CDA training area 2 or 3.*	
d.		The reader introduces and explains any unfamiliar vocabulary from the book. *CDA training area 2.*	

III. Reading the Book

		Criteria being observed	Comments
a.		The reader is familiar with the text, fluent in the vocabulary and usage. *CDA training area 3.*	
b.		Reads in a lively and engaging manner. *CDA training area 3.*	
c.		All children are given adequate time to look at each illustration. *CDA training area 8.*	
d.		The reader reflects the emotion of the story with facial, vocal and body language. *CDA training area 3.*	
e.		The reader shows delight in reading aloud. *CDA training area 3.*	
f.		The reader mentions author and illustrator by name. *CDA training area 2.*	

		Criteria being observed	Comments
g.		The reader does not disrupt narrative flow with excessive questions or information (this is critically important in the first reading of a book). *CDA training area 2.*	

IV. After Reading the Book

		Criteria being observed	Comments
a.		The reader asks open-ended questions in an engaging way to increase comprehension. *CDA training area 2.*	
b.		The reader reinforces connections between and among the book's content and any materials, activities, interest areas, and ongoing classroom projects. *CDA training area 2*	
c.		The reader shows children where the book will be kept for future reference. *CDA training area 8.*	
d.		Children are encouraged to read independently. *CDA training area 8.*	
e.		Children are encouraged to relate the events or characters in the book to their own lives. *CDA training area 3.*	

V. Other Literacy and Language Techniques

The following behaviors may be evident some of the time when a book is read aloud to a group. These behaviors are intended to enhance the read-aloud experience, stimulate conversation and facilitate learning. Four or more of these techniques should be present during a read-aloud session.

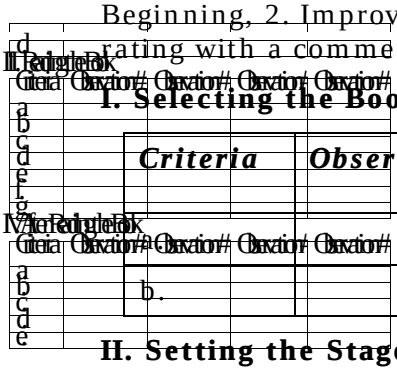
		Criteria observed	Comments
a.		The reader asks open-ended questions about the title page, half-title page and endpapers. *CDA training area 2.*	
b.		The reader provides information about the artwork and technique. *CDA training area 2.*	
c.		Children are encouraged to discuss the characters. *CDA training area 2.*	
d.		The reader emphasizes rhyming language and gives cues to help children notice rhymes, alliteration and assonance. *CDA training area 3.*	

		Criteria observed	Comments
e.		Children are encouraged to participate in any repetitive language. *CDA training area 8.*	
f.		The reader provides opportunities for children to predict what will happen next. *CDA training area 2.*	
g.		Children are encouraged to interpret symbols such as signs, images, or drawings. *CDA training area 2.*	
h.		The reader shows children that print runs from left to right. *CDA training area 2.*	
i.		Children are encouraged to recognize or identify individual letters. *CDA training area 2.*	
j.		Children are encouraged to recognize upper and lower case letters. *CDA training area 2.*	
k.		Children are encouraged to interpret facial expressions and body language of characters. *CDA training area 3.*	
l.		Children are encouraged to compare or contrast this book to other books by either the same author or illustrator. *CDA training area 2.*	
m.		Children are introduced to poems, songs and finger plays that are connected to the story. *CDA training area 8.*	
n.		Children are given opportunities to recall the sequence of events in the story. *CDA training area 2.*	
o.		Book choice reflects an opportunity to build vocabulary. *CDA training area 2.*	
p.		Children are encouraged to borrow this book to share with their families. *CDA training area 4.*	

Additional Comments

Reading Picture Books to Young Children-Longitudinal Checklist

Early Childhood Professionals being observed should be rated at one of three levels: 1. Beginning, 2. Improving, or 3. Mastering. The observers may wish to expand on their rating with a comment using the space at the end of this form.



I. Selecting the Book

Criteria	*Observation #*	*Observation #*	*Observation #*	*Observation #*
a.				
b.				

II. Setting the Stage

Criteria	Observation #	Observation #	Observation #	Observation #
a.				
b.				

V. Other Literacy and Language Techniques

Criteria	Observation #	Observation #	Observation #	Observation #
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				
k.				
l.				
m.				
n.				
o.				
p.				

Additional Comments

Handout 16: Environmental Scan for Literacy Materials

An Environmental Scan for Literacy Materials and Richness of Setups and Areas

	Present		Chalk Board	Signs	Pencils, Paper, etc.	Books	Labels	Charts	Print Props	Children's Print	Other (Note)
	Yes	No									
Dramatic Play											
Manipulatives/Puzzles											
Book Area											
Blocks											
Construction											
Sand/Water/Rice											
Science											
Writing Area											
Painting/Art											
Table Area(s) & or Projects											
Meeting											
Quiet Place											
Large Motor											
Snack											
General											

From: Goldhaber, Lipson, Sortino & Daniels. *Books in the Sandbox? Markers in the Block? ...* , Childhood Education, 1996/97: 88-91.

Handout 17: Through a Child's Eyes

Materials

Through a Child's Eyes handout

Room Arrangement

Any space

Time

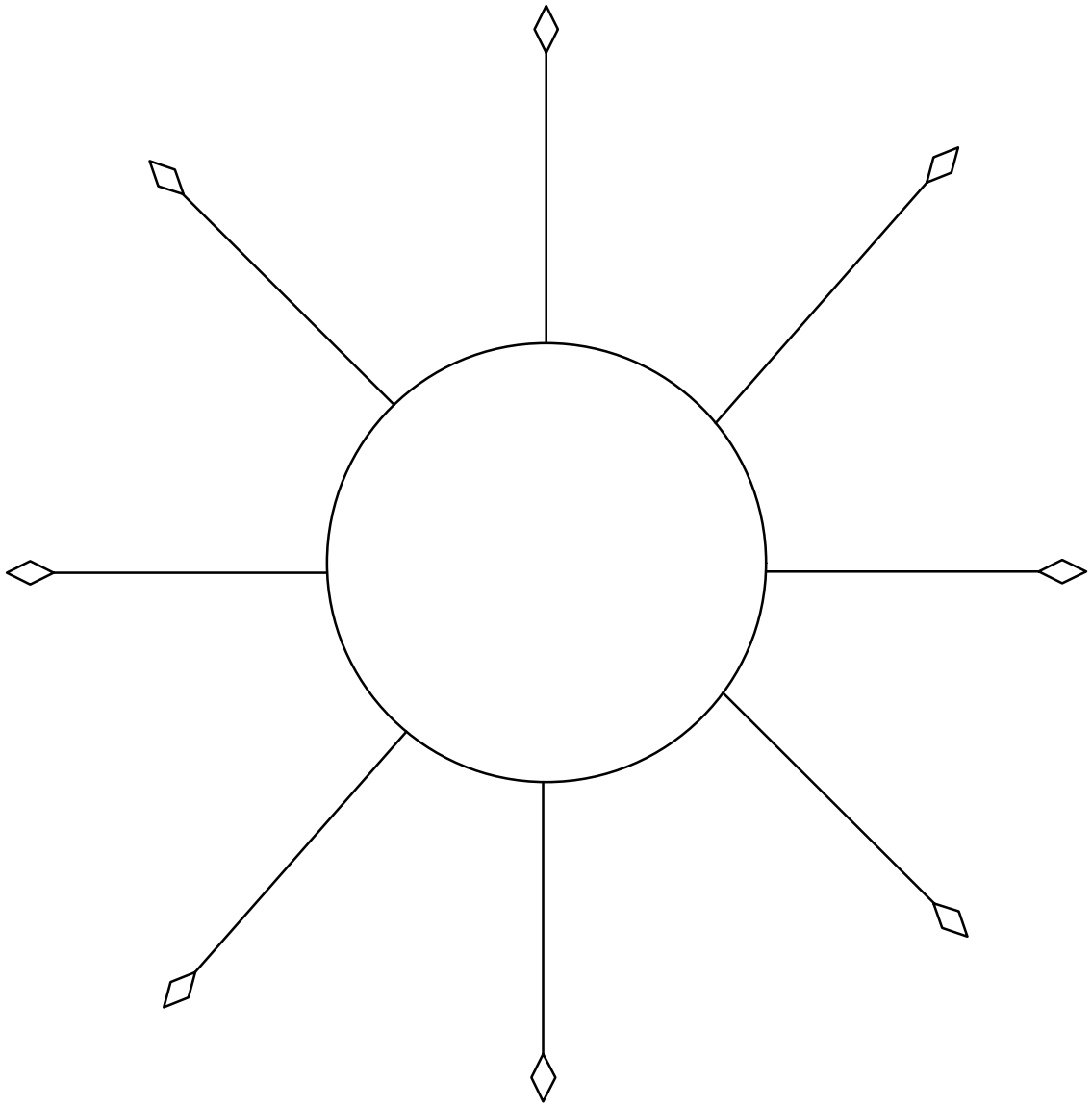
5-10 minutes

Goal

To see, from a child's point of view, the ways participants can use themselves and their classroom or home environments to strengthen the support given to language, literacy & communication.

Instructor

1. Ask participants to think about two children they know; one who stands out with strong language, literacy & communication abilities, and one whose are not as strong.
2. Think about your program. Looking through the eyes of these two children, what do they need most from you as a teacher, and your classroom environment to demonstrate examples from VELS Language, literacy & communication?
3. Using the diagram on the next page, write one child's name in the center of the sun. Write something you will do (adult role) and something you can change in your home or classroom (role of the environment) to support that child in language, literacy & communication.



Module 3: Language, Literacy & Communication

Language, Literacy & Communication Professional Resources

Bredekamp, S., & C. Copple, eds. Developmentally appropriate practice in early childhood programs, revised edition. Washington, DC: NAEYC, 1997

Chomsky, N., & M. Ronat. On language: Chomsky's classic works language and responsibility and reflections on language. New York: The New Press, 1998.

Dickinson, D., and P. Tabors, eds. Beginning literacy with language: Young children learning at home and school. Baltimore: Paul H. Brookes Publishing Co., 2001

Donovan, C., E.J. Milewicz, & L.B. Smolkin. "Nurturing young children's interest in reading and writing for multiple purposes." Young Children 58 (2), 2003: 30-36.

Goldhaber, J., M. Lipson, S. Sortino & P. Daniels. "Books in the sand box? Markers in the blocks? Expanding the child's world of literacy." Childhood Education, 1996/1997: 88-91.

Hart, B., and T. Risley. Meaningful differences in the everyday experience of young American children. Brookes Publishing, 1995.

International Reading Association and National Association for the Education of Young Children. Learning to read and write: Developmentally appropriate practices for young children. Joint Position Statement. Washington, DC., 1998.

Jalonko, M.R. Young children and picture books, 2nd edition. Washington, DC: NAEYC, 2004.

Pinker, S. The language instinct: How the mind creates language. New York: Perennial, 2000.

Roskos, K.A., J.F. Christie & D.J. Richgels. The essentials of early literacy instruction. *Young Children* 58 (2), 2003: 52-59.

Schikedanz, J.A., and R.M. Casberge. Writing in preschool: Learning to orchestrate meaning and marks. Newark, DE: International Reading Association, 2004.

Smith, M., & D. Dickinson. Early language and literacy classroom observation toolkit. Baltimore: Paul H. Brookes Publishing Co., 2002.

U.S. Department of Health and Human Services. National Head Start S.T.E.P. teacher's manual. Houston: C.I.R.C.L.E, University of Texas Health Science Center, 2002.

Supplemental Material

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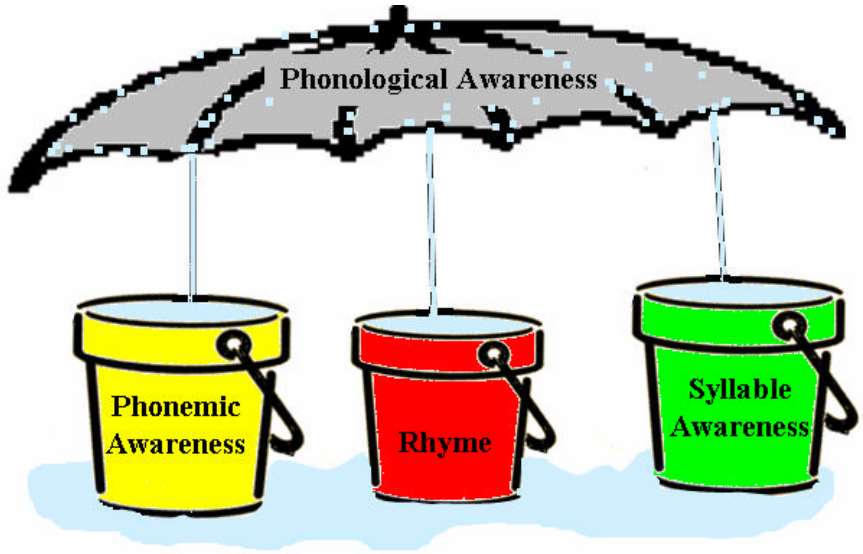
The Sounds of Language

One of the ways that children develop early reading skills is through developing an understanding of the sounds of spoken language separately from the meaning. This awareness begins to develop at birth with crying and can be seen as children learn to talk and form sounds into words. It continues through the preschool years as children learn about rhyme and alliteration (beginning sounds of words). Children's understanding of sounds deepens as they begin to discriminate and order the sounds they hear. These skills continue to develop and strengthen through their school years as children learn to read. Adults can help to support this development through shared reading, singing songs, games, and talking with young children. Here are some of the things that children learn about the sounds of spoken language and that help to form a basis for their reading.



Phonological Awareness – the understanding that spoken words are made up of sounds and that this structure is separate from the meaning. The term includes the understanding of rhyme, phonemic awareness, and syllable awareness. It also includes knowing that words are contained in sentences, rhyming units exist within words, and that words begin and end with sounds.

Children learn that language consists of sounds long before they learn to read or learn that letters stand for certain sounds. Learning to form the sounds themselves is one of the earliest skills children develop and is what enables them to talk and form words. Children begin to play with the sounds in language at a young age, beginning to enjoy rhymes and tongue twisters in songs and books. This shows a developing phonological awareness. Phonological awareness eventually helps children learn to read and write because they can understand that letters stand for sounds and that the sounds can be combined in different ways to form words and sentences.

Rhyme – the understanding that the ending sounds of spoken words can sound the same (i.e. /note/ and /boat/ or /cat/ and /hat/).

Awareness of rhyme often occurs around age three or four. Understanding of rhyme develops from the early recognition and enjoyment of rhyme when it occurs (i.e. repeating "Matt's hat" over and over again after having heard it in a story). Children next begin to complete rhymes ("hat" "b__"). Finally, children are able to generate rhymes on their own. As children get older, understanding of rhyme can help them read and write unfamiliar words.

Phoneme – an individual sound within a spoken word. Phonemes are combined to form syllables and words. Phonemes may be represented by more than one letter in written language (i.e. /n/ is a phoneme, but so is /ch/ and /chin/ has three phonemes – or sounds – in it).

As children learn about letters, they begin to apply what they know about phonemes (their phonemic awareness) to their understanding of letters as symbols for the phonemes.

Phonemic Awareness – the understanding that a spoken word is made up of a series of separate sounds (phonemes). Phonemic awareness consists of a number of separate skills, many of which are developed after the preschool years:

- Substitution – changing /mat/ to /map/
- Discriminating – knowing that /mat/ begins with an /m/ sound
- Isolating – knowing the last sound in /mat/ is a /t/
- Blending – being able to combine the sounds /m/ and /at/ to get /mat/
- Segmenting – being able to break out the sounds /m/, /a/, and /t/ from the word /mat/
- Deleting – taking the /m/ sound off of /mat/ to form /at/
- Manipulating – being able to rearrange the sounds in /stop/ to form /pots/

Children initially hear the beginning sounds of words (the /s/ in /snake/), and then hear the final and middle sounds. Children are often experimenting with the initial sounds in words through alliteration and tongue twisters during the preschool years. As children learn about letters, they build their understanding of how letters representing phonemes can be combined to form words and syllables.

Syllable Awareness – the awareness that spoken words can be broken into parts (known as syllables). Some words are a single syllable and some words contain multiple syllables. Not all syllables carry meaning by themselves. Syllable awareness is also broken into several skills:

- Counting – being able to count or clap out syllables in spoken words
- Blending – being able to combine syllables to form words (i.e. /drive/ and /way/ form /driveway/)
- Segmenting – being able to break a word into its syllables (i.e. /driveway/ becomes /drive/ and /way/)
- Deleting – being able to delete a syllable from a word (i.e. /driveway/ becomes /drive/)

Recognizing and clapping out syllables is a skill that some preschool-aged children are able to master. This awareness often helps children begin to build an understanding of the way that sounds are ordered in individual words.

The Early Catastrophe

The 30 Million Word Gap by Age 3
Betty Hart and Todd R. Risley

During the 1960's War on Poverty, we were among the many researchers, psychologists, and educators who brought our knowledge of child development to the front line in an optimistic effort to intervene early to forestall the terrible effects that poverty was having on some children's academic growth. We were also among the many who saw that our results, however promising at the start, washed out fairly early and fairly completely as children aged.

In one planned intervention in Kansas City, Kans., we used our experience with clinical language intervention to design a half-day program for the Turner House Preschool, located in the impoverished Juniper Gardens area of the city. Most interventions of the time used a variety of methods and then measured results with IQ tests, but ours focused on building the everyday language the children were using, then evaluating the growth of that language. In addition, our study included not just poor children from Turner House, but also a group of University of Kansas professors' children against whom we could measure the Turner House children's progress.

All the children in the program eagerly engaged with the wide variety of new materials and language-intensive activities introduced in the preschool. The spontaneous speech data we collected showed a spurt of new vocabulary words added to the dictionaries of all the children and an abrupt acceleration in their cumulative vocabulary growth curves. But just as in other early intervention programs, the increases were temporary.

We found we could easily increase the size of the children's vocabularies by teaching them new words. But we could not accelerate the rate of vocabulary growth so that it would continue beyond direct teaching; we could not change the developmental trajectory. However many new words we taught the children in the preschool, it was clear that a year later, when the children were in kindergarten, the effects of the boost in vocabulary resources would have washed out. The children's developmental trajectories of vocabulary growth would continue to point to vocabulary sizes in the future that were increasingly discrepant from those of the professors' children. We saw increasing disparity between the extremes--the fast vocabulary growth of the professors' children and the slow vocabulary growth of the Turner House children. The gap seemed to foreshadow the findings from other studies that in high school many children from families in poverty lack the vocabulary used in advanced textbooks.

Rather than concede to the unmalleable forces of heredity, we decided that we would undertake research that would allow us to understand the disparate developmental trajectories we saw. We realized that if we were to understand how and when differences in developmental trajectories began, we needed to see what was happening to children at home at the very beginning of their vocabulary growth.

We undertook 2 ½ years of observing 42 families for an hour each month to learn about what typically went on in homes with 1- and 2-year-old children learning to talk. The data showed us that ordinary families differ immensely in the amount of experience with language and interaction they regularly provide their children and that differences in children's experience are strongly linked to children's language accomplishments at age 3. Our goal in the longitudinal study was to discover what

was happening in children's early experience that could account for the intractable difference in rates of vocabulary growth we saw among 4-year-olds.

Methodology

Our ambition was to record "everything" that went on in children's homes--everything that was done by the children, to them, and around them. Because we were committed to undertaking the labor involved in observing, tape recording, and transcribing, and because we did not know exactly which aspects of children's cumulative experience were contributing to establishing rates of vocabulary growth, the more information we could get each time we were in the home the more we could potentially learn.

We decided to start when the children were 7-9 months old so we would have time for the families to adapt to observation before the children actually began talking. We followed the children until they turned three years old.

The first families we recruited to participate in the study came from personal contacts: friends who had babies and families who had had children in the Turner House Preschool. We then used birth announcements to send descriptions of the study to families with children of the desired age. In recruiting from birth announcements, we had two priorities. The first priority was to obtain a range in demographics, and the second was stability--we needed families likely to remain in the longitudinal study for several years. Recruiting from birth announcements allowed us to preselect families. We looked up each potential family in the city directory and listed those with such signs of permanence as owning their home and having a telephone. We listed families by sex of child and address because demographic status could be reliably associated with area of residence in this city at that time. Then we sent recruiting letters selectively in order to maintain the gender balance and the representation of socioeconomic strata.

Our final sample consisted of 42 families who remained in the study from beginning to end. >From each of these families, we have almost 2 1/2 years or more of sequential monthly hour-long observations. On the basis of occupation, 13 of the families were upper socioeconomic status (SES), 10 were middle SES, 13 were lower SES, and six were on welfare. There were African-American families in each SES category, in numbers roughly reflecting local job allocations. One African-American family was upper SES, three were middle, seven were lower, and six families were on welfare. Of the 42 children, 17 were African American and 23 were girls. Eleven children were the first born to the family, 18 were second children, and 13 were third or later-born children.

What We Found

Before children can take charge of their own experience and begin to spend time with peers in social groups outside the home, almost everything they learn comes from their families, to whom society has assigned the task of socializing children. We were not surprised to see the 42 children turn out to be like their parents; we had not fully realized, however, the implications of those similarities for the children's futures. We observed the 42 children grow more like their parents in stature and activity levels, in vocabulary resources, and in language and interaction styles. Despite the considerable range in vocabulary size among the children, 86 percent to 98 percent of the words recorded in each child's vocabulary consisted of words also recorded in their parents' vocabularies. By the age of 34-36 months, the children were also talking and

using numbers of different words very similar to the averages of their parents (see the table below).

Families' Language and Use Differ Across Income Groups

	Families					
	13 Professional		23 Working-class		6 Welfare	
Measures & Scores	Parent	Child	Parent	Child	Parent	Child
Protest score[a]	41		31		14	
Recorded vocabulary size	2,176	1,116	1,498	749	974	525
Average utterances per hour[b]	487	310	301	223	176	168
Average different words per hour	382	297	251	216	167	149

[a] When we began the longitudinal study, we asked the parents to complete a vocabulary pretest. At the first observation each parent was asked to complete a form abstracted from the Peabody Picture Vocabulary Test (PPVT). We gave each parent a list of 46 vocabulary words and a series of pictures (four options per vocabulary word) and asked the parent to write beside each word the number of the picture that corresponded to the written word. Parent performance on the test was highly correlated with years of education (r = .57).

[b] Parent utterances and different words were averaged over 13-36 months of child age. Child utterances and different words were averaged for the four observations when the children were 33-36 months old.

By the time the children were 3 years old, trends in amount of talk, vocabulary growth, and style of interaction were well established and clearly suggested widening gaps to come. Even patterns of parenting were already observable among the children. When we listened to the children, we seemed to hear their parents speaking; when we watched the children play at parenting their dolls, we seemed to see the futures of their own children.

We now had answers to our 20-year-old questions. We had observed, recorded, and analyzed more than 1,300 hours of casual interactions between parents and their language-learning children. We had dissembled these interactions into several dozen molecular features that could be reliably coded and counted. We had examined the correlations between the quantities of each of those features and several outcome measures relating to children's language accomplishments.

After all 1,318 observations had been entered into the computer and checked for accuracy against the raw data, after every word had been checked for spelling and coded and checked for its part of speech, after every utterance had been coded for syntax and discourse function and every code checked for accuracy, after random samples had been recoded to check the reliability of the coding, after each file had been checked one more time and the accuracy of each aspect verified, and after the data analysis programs had finally been run to produce frequency counts and dictionary lists for each observation, we had an immense numeric database that

required 23 million bytes of computer file space. We were finally ready to begin asking what it all meant.

It took six years of painstaking effort before we saw the first results of the longitudinal research. And then we were astonished at the differences the data revealed (see the graph at left).

Like the children in the Turner House Preschool, the three year old children from families on welfare not only had smaller vocabularies than did children of the same age in professional families, but they were also adding words more slowly. Projecting the developmental trajectory of the welfare children's vocabulary growth curves, we could see an ever-widening gap similar to the one we saw between the Turner House children and the professors' children in 1967.

While we were immersed in collecting and processing the data, our thoughts were concerned only with the next utterance to be transcribed or coded. While we were observing in the homes, though we were aware that the families were very different in lifestyles, they were all similarly engaged in the fundamental task of raising a child. All the families nurtured their children and played and talked with them. They all disciplined their children and taught them good manners and how to dress and toilet themselves. They provided their children with much the same toys and talked to them about much the same things. Though different in personality and skill levels, the children all learned to talk and to be socially appropriate members of the family with all the basic skills needed for preschool entry.

Test Performance in Third Grade Follows Accomplishments at Age 3

We wondered whether the differences we saw at age 3 would be washed out, like the effects of a preschool intervention, as the children's experience broadened to a wider community of competent speakers. Like the parents we observed, we wondered how much difference children's early experiences would actually make. Could we, or parents, predict how a child would do in school from what the parent was doing when the child was 2 years old?

Fortune provided us with Dale Walker, who recruited 29 of the 42 families to participate in a study of their children's school performance in the third grade, when the children were nine to 10 years old.

We were awestruck at how well our measures of accomplishments at age 3 predicted measures of language skill at age 9-10. From our preschool data we had been confident that the rate of vocabulary growth would predict later performance in school; we saw that it did. For the 29 children observed when they were 1-2 years old, the rate of vocabulary growth at age 3 was strongly associated with scores at age 9-10 on both the Peabody Picture Vocabulary Test-Revised (PPVT-R) of receptive vocabulary ($r = .58$) and the Test of Language Development-2: Intermediate (TOLD) ($r = .74$) and its subtests (listening, speaking, semantics, syntax).

Vocabulary use at age 3 was equally predictive of measures of language skill at age 9-10. Vocabulary use at age 3 was strongly associated with scores on both the PPVT-R ($r = .57$) and the TOLD ($r = .72$). Vocabulary use at age 3 was also strongly associated with reading comprehension scores on the Comprehensive Test of Basic Skills (CTBS/U), ($r = .56$).

The 30 Million Word Gap By Age 3

All parent-child research is based on the assumption that the data (laboratory or field) reflect what people typically do. In most studies, there are as many reasons that the averages would be higher than reported as there are that they would be lower. But all researchers caution against extrapolating their findings to people and circumstances they did not include. Our data provide us, however, a first approximation to the absolute magnitude of children's early experience, a basis sufficient for estimating the actual size of the intervention task needed to provide equal experience and, thus, equal opportunities to children living in poverty. We depend on future studies to refine this estimate.

Because the goal of an intervention would be to equalize children's early experience, we need to estimate the amount of experience children of different SES groups might bring to an intervention that began in preschool at age 4. We base our estimate on the remarkable differences our data showed in the relative amounts of children's early experience: Simply in words heard, the average child on welfare was having half as much experience per hour (616 words per hour) as the average working-class child (1,251 words per hour) and less than one-third that of the average child in a professional family (2,153 words per hour). These relative differences in amount of experience were so durable over the more than two years of observations that they provide the best basis we currently have for estimating children's actual life experience.

A linear extrapolation from the averages in the observational data to a 100-hour week (given a 14-hour waking day) shows the average child in the professional families with 215,000 words of language experience, the average child in a working-class family provided with 125,000 words, and the average child in a welfare family with 62,000 words of language experience. In a 5,200-hour year, the amount would be 11.2 million words for a child in a professional family, 6.5 million words for a child in a working-class family, and 3.2 million words for a child in a welfare family. In four years of such experience, an average child in a professional family would have accumulated experience with almost 45 million words, an average child in a working-class family would have accumulated experience with 26 million words, and an average child in a welfare family would have accumulated experience with 13 million words. By age 4, the average child in a welfare family might have 13 million fewer words of cumulative experience than the average child in a working-class family. This linear extrapolation is shown in the graph below.

But the children's language experience did not differ just in terms of the number and quality of words heard. We can extrapolate similarly the relative differences the data showed in children's hourly experience with parent affirmatives (encouraging words) and prohibitions. The average child in a professional family was accumulating 32 affirmatives and five prohibitions per hour, a ratio of 6 encouragements to 1 discouragement. The average child in a working-class family was accumulating 12 affirmatives and seven prohibitions per hour, a ratio of 2 encouragements to 1 discouragement. The average child in a welfare family, though, was accumulating five affirmatives and 11 prohibitions per hour, a ratio of 1 encouragement to 2 discouragements. In a 5,200-hour year, that would be 166,000 encouragements to 26,000 discouragements in a professional family, 62,000 encouragements to 36,000 discouragements in a working-class family, and 26,000 encouragements to 57,000 discouragements in a welfare family.

Extrapolated to the first four years of life, the average child in a professional family would have accumulated 560,000 more instances of encouraging feedback than discouraging feedback, and an average child in a working-class family would have accumulated 100,000 more encouragements than discouragements. But an average child in a welfare family would have accumulated 125,000 more instances of prohibitions than encouragements. By the age of 4, the average child in a welfare family might have had 144,000 *fewer* encouragements and 84,000 *more* discouragements of his or her behavior than the average child in a working-class family.

Extrapolating the relative differences in children's hourly experience allows us to estimate children's cumulative experience in the first four years of life and so glimpse the size of the problem facing intervention. Whatever the inaccuracy of our estimates, it is not by an order of magnitude such that 60,000 words becomes 6,000 or 600,000. Even if our estimates of children's experience are too high by half, the differences between children by age 4 in amounts of cumulative experience are so great that even the best of intervention programs could only hope to keep the children in families on welfare from falling still further behind the children in the working-class families.

The Importance of Early Years Experience

We learned from the longitudinal data that the problem of skill differences among children at the time of school entry is bigger, more intractable, and more important than we had thought. So much is happening to children during their first three years at home, at a time when they are especially malleable and uniquely dependent on the family for virtually all their experience, that by age 3, an intervention must address not just a lack of knowledge or skill, but an entire general approach to experience.

Cognitively, experience is sequential: Experiences in infancy establish habits of seeking, noticing, and incorporating new and more complex experiences, as well as schemas for categorizing and thinking about experiences. Neurologically, infancy is a critical period because cortical development is influenced by the amount of central nervous system activity stimulated by experience. Behaviorally, infancy is a unique time of helplessness when nearly all of children's experience is mediated by adults in one-to-one interactions permeated with affect. Once children become independent and can speak for themselves, they gain access to more opportunities for experience. But the amount and diversity of children's past experience influences which new opportunities for experience they notice and choose.

Estimating, as we did, the magnitude of the differences in children's cumulative experience before the age of 3 gives an indication of how big the problem is. Estimating the hours of intervention needed to equalize children's early experience makes clear the enormity of the effort that would be required to change children's lives. And the longer the effort is put off, the less possible the change becomes. We see why our brief, intense efforts during the War on Poverty did not succeed. But we also see the risk to our nation and its children that makes intervention more urgent than ever.

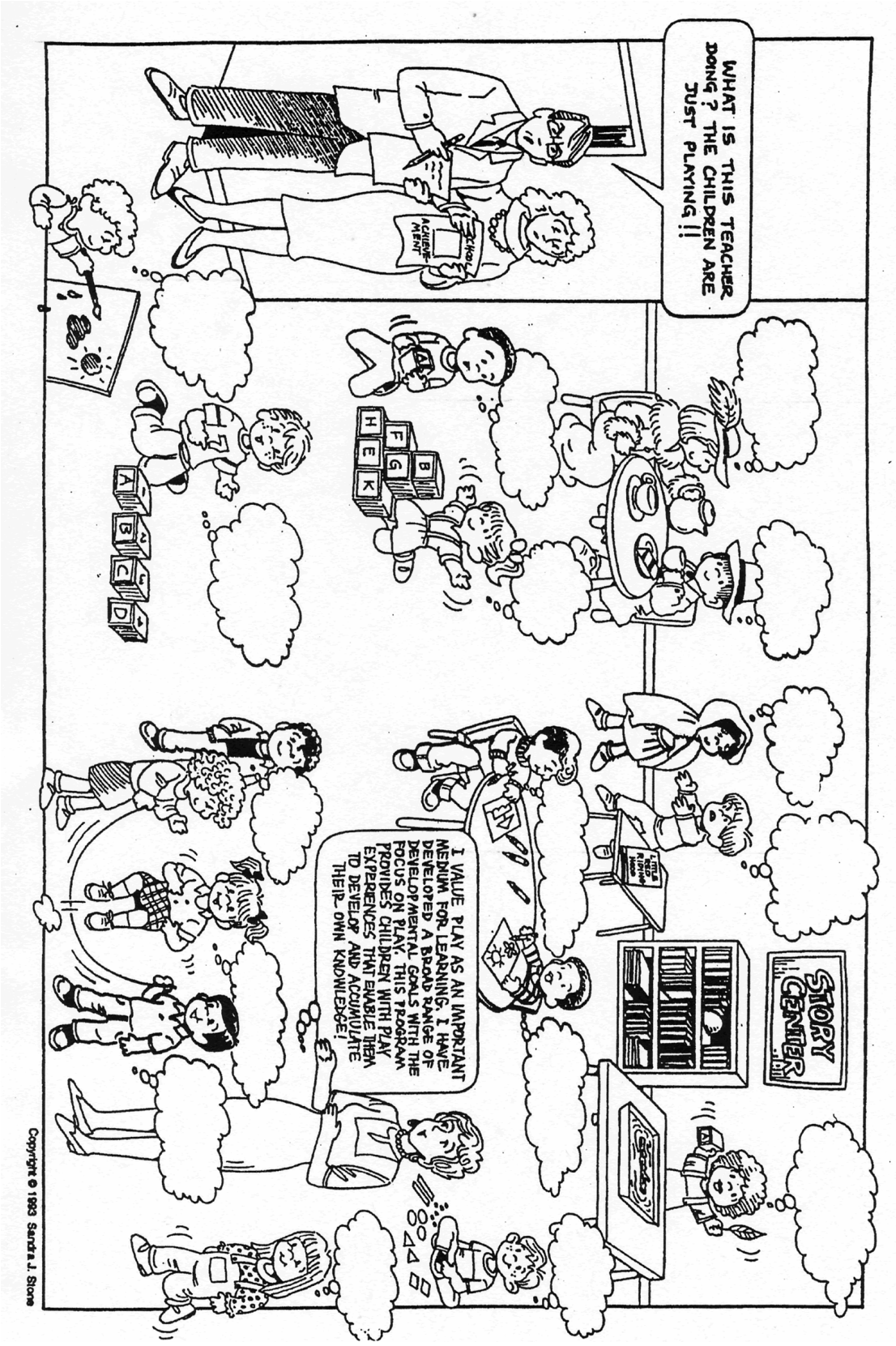
Betty Hart is professor of Human Development at the University of Kansas and senior scientist at the Schiefelbusch Institute for Life Span Studies. Todd R. Risley is professor in the Department of Psychology at the University of Alaska Anchorage and director of Alaska's Autism Intensive Early Intervention Project. The two have collaborated on research projects for more then 35 years. This article is excerpted with permission from *Meaningful Differences in the Everyday Experiences of Young American Children*, Copyright 1995, Brookes; http://www.brookespublishing.com/, 1-800-638-3775; $29.00.

The Number of Words Heard at Home in an Hour by 1- and 2-Year-Olds Learning to Talk

2,153	Average child in a professional family
1,251	Average child in a working class family
616	Average child receiving federal/state welfare benefits

Source: Hart, B., and T. Risley. Meaningful differences in the everyday experience of young American children. Brookes Publishing, 1995.

Sandra Stone Cartoon



Module 4: Mathematics

Materials Needed

- Copies of the VELS
- Handouts
- VCR and videotapes (optional)
- Flip chart, tape, and markers
- Art postcards, calendars or posters (optional)
- Blocks

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Develop a deeper understanding of mathematics, including mathematical terminology	Teaching and Learning
Become intentional about play as a vehicle for developing children's understanding of mathematics	Child Development Teaching and Learning
Understand the learning goals and definitions related to young children and mathematics	Teaching and Learning
Understand how children's mathematical thinking changes over time	Child Development
Become familiar with the adult role in supporting children's mathematical development	Teaching and Learning
Become familiar with the way the environment supports children's mathematical understanding	Health and Safety
Increase their skills in observing and assessing how children develop mathematical concepts, processes and skills	Teaching and Learning
Become familiar with professional resources and research on children's mathematical development	Teaching and Learning Professionalism and Program Organization
Be able to describe ways to support children's mathematical development to others, including parents	Family and Community

Note

Specific page references to the Mathematics domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg 20. Relevant pages for this module are 14-15, 27 and 30.

Module 4: Mathematics

Introduction and Opening Activity

1. Make sure participants and the instructor introduce themselves including pertinent information about their work and work settings.
2. Choose an opening activity from the options listed below:
    - Use *Handout 1: Where Do You Stand?* for an informal assessment of beliefs and attitudes about mathematics.
    - In pairs, do a simple assessment of mathematics understanding, using *Handout 2: How Many Ways to Solve 34 + 48?* or a similar activity.
    - Have participants reflect on the following quote by Marilyn Burns, and then share their thoughts with the group. Use *Handout 3: Marilyn Burns Quote*, if needed.

        > Otherwise well-educated adults, confident and successful in most aspects of their lives make easy confessions at dining tables, "I'm not good at math. I never was any good at math. I hate math!"

    - Use these questions to facilitate individual reflections: Do you know people like this? How do our past experiences with mathematics in school affect our attitudes toward mathematics with children? ZZZ this is number 3

Review the Standard and Domain

- The instructor should review the Mathematics section of VELS, pages 14-15. Take notice of the introduction; explanation of the domain; learning goals and definitions; examples; correlation to Vermont Frameworks and Head Start outcomes; role of the adult; and the role of the environment.
- In small groups or pairs, have participants cover up the examples column on page 14. Ask them to pick one learning goal and describe 2-3 examples they have seen of children's behavior or actions related to that goal. Uncover the examples column and discuss how their responses compared to the examples provided in the VELS.
- Invite group discussion on one of the following topics:
- How children's interest in mathematics is affected by adult's attitudes about math
- Mathematics in the context of children's lives
- The mathematics understanding required to get from your home to this workshop

The Development of Mathematical Thinking

This section serves as a basis of understanding how children develop mathematical thinking as well as a refresher for adults in the terminology and operations of mathematics. Refer to Chapter 6 in Copley, J. ed. Mathematics in the early years. Reston, VA: National Council of Teachers of Mathematics and National Association for the Education of Young Children, 1999 for more information and relevant vignettes.

Instructors should use the following key points to develop a mini-lecture on the development of mathematical thinking.

In the preschool years, children develop mathematical understanding through:

- The appearance of things: ***** looks like it is less than * * * * *
- Their experience with things: having learned that both sets above contain five stars, they know to count the stars before making assumptions based on appearance
- Formal knowledge: school and adult-led instruction

Components of Formal Knowledge

1. Numbers and Operations
Children show interest and curiosity in counting and grouping objects and numbers.

Counting Concepts and Skills

Oral Counting–Stating the numbers in the correct order; counting patterns: learning the patterns of number order:

- Single digit sequence of one-nine
- Transitions are signaled by the nine
- Transition terms for the new series (twenty, thirty, etc.)
- Rules for generating the series (numbers after 20 are the word *twenty* plus the name of the single digits)
- Exceptions to the rules (the teens, fifteen)

1:1 Correspondence–Matching the number word to items tagged

- Placing an object in a designated space (pegs in a pegboard, cup on a saucer)
- Matching pairs of objects (mittens, shoes, socks)
- Pairing objects to other objects (lines up brushes to paint pots, cups to chairs around the snack table, dealing one card per person)
- Comparing objects in two sets (who has more blocks, are there more girls or boys in the classroom?)

Object Counting–Using only one number word per object you want to count

- *1:1 correspondence counting*: matching number-words to objects while counting (not necessarily in sequence).
- *Cardinality*: when counting a set of objects, the last number said tells you how many objects are in the set.
- *Counting out sets*: counting out a specified number of objects from a pile of items.
- *Order irrelevance*: counting can be done in any order (left to right, horizontally, right to left) and the amount stays the same.

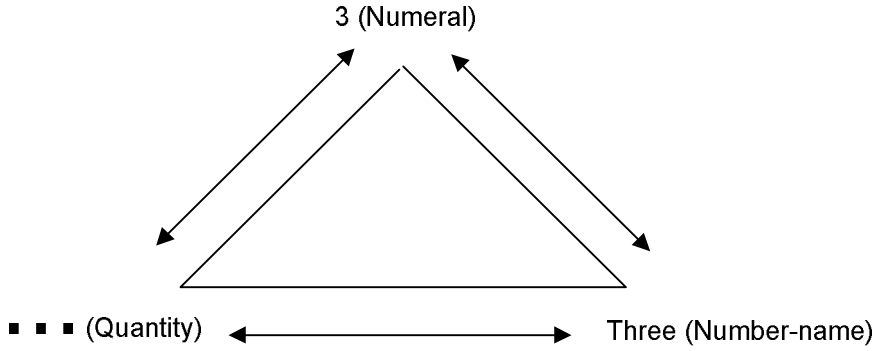
Activity: Children Counting

1. Depending on the size of the group, choose to do this in pairs, small groups or with the group as a whole.
2. Have participants make a list of all the opportunities they can think of to observe children counting. Where and when might they observe children counting? How teachers encourage children to count?

Number Concepts and Skills

The number is the concept; the numeral is the symbol.

The Numeracy Triangle Three ways to recognize and represent numbers (see Copley, J. ed. Mathematics in the early years. Reston, VA: National Council of Teachers of Mathematics and National Association for the Education of Young Children, 1999: 131)



Subitizing Instant recognition of the quantity of a small group of objects – knowing * * * are three stars without having to count them. Subitizing is evident through objects, finger patterns (holding up fingers to represent a quantity), and dot patters (as on dice).

Operations Using number concepts to solve problems in a context

Addition–joining sets or combining quantities

Subtraction–taking sets apart, separating

Multiplication–adding multiple equal sets of objects

Division–splitting sets; giving each their "fair share"

Activity: Empty Your Pockets

1. In small groups, ask people to pull three objects out of their purse/pocket/briefcase and put them in the middle of the table.
2. Do as many operations as you can with these objects. Come up with your own activities that demonstrate: Subitizing, The Numeracy Triangle, and Operations. How might children use objects in play to discover these concepts?

2. Geometry and Spatial Sense
Choose one of the following activities:

Activity: Shape Hunt

1. In small groups, assign people a section of the room or building to go on a shape hunt.
2. Have them make a list of every shape they find, using all the shape words they know. Return to the large group and report out. Are there any shape names you didn't know or remember?

Activity: Art and Architecture

1. Mathematics can be defined as the study of patterns and relationships. This definition could also apply to art, architecture, design and crafts.
2. Collect postcards, calendars or other visual art of buildings or architecture, textures, plants, tiles, fabrics, etc.
3. In small groups, have people explore the artwork and notice the patterns and shapes, identifying the names of them if possible.

Fun facts about shapes

- Humans prefer closed, symmetric shapes
- Shapes come in many different proportions and orientations.
- Shapes consist of lines, points and angles
- Squares are rectangles
- Shape categories include polygons, ellipses, quadrilaterals
- Polygon—two dimensional closed figure with four sides
- Shapes have two or three-dimensions; two-dimensional shapes have one face, three-dimensional shapes have multiple faces

Spatial Sense includes

- Orientation (where you are and how to get around)
- Position (on/off; top/bottom; under/over)

- Direction (forward, backward, to the side)
- Distance (how far/close, how long/short)

Activity: Stack It

1. Using 6-10 blocks of assorted shapes and sizes, have people experiment with different ways to stack blocks. Try to arrange them so that all blocks are used to make the smallest shape possible, and the largest shape possible. Try to arrange them so that the unique shape face is visible.
2. Make a list of every shape word children use in play and conversation.

Many mathematics activities for young children use mainly two-dimensional shapes. Including both two- and three-dimensional materials help children identify the differences and see the relationship between them. The use of a variety of three-dimensional objects and blocks provide inviting, concrete, yet complex experiences for shape investigation. When children build with three-dimensional, modular materials they change the positions of both the materials and themselves in a physical space where their perspective is also changing.

3. Patterns and Measurement
Children show an interest in recognizing, creating, and predicting patterns; comparing objects; and measuring time and quantity.

Patterns	These can be repeating * _ * _ * _ or growing * ** *** **** *****
	First, children identify similarities and differences between elements of a pattern. Then, they predict what will come next
Measurement	Includes integration and application of number, shape, spatial concepts. Measurement is the assignment of a numerical value to an attribute of an object. Measurement is a practical, real-life activity that connects to other areas of mathematics such as number and operations, and geometric ideas. Length/height, weight/capacity, time are things that can be measured.
Tools for measurement	What tools do you use with children?
	Conventional tools–rulers, scales, thermometers
	Invented tools–hands, feet, books, etc.

What Does Mathematics Look Like?

What does mathematics look like and how might teachers observe it in young children? Play is the first learning goal in the mathematics domain of VELS. While children are "natural mathematicians", and much of their play involves mathematics concepts, teachers must be keen observers of children's play in order to understand what they are learning as well as what their misconceptions are. Through observing

children's mathematics play, teachers will know how to ask questions, make suggestions and offer help that extend and deepen children's mathematics knowledge and skills. This is an example of using intentionality in teaching.

Choose one of the following activities:

Activity: Where is the Math Here?

1. Show a videotape of children at play, such as "The Long Jump: A video analysis of early education in Reggio Emilia, Italy" narrated by George Forman; "Thinking Big: Extending emergent curriculum projects" or one selected by the instructor.
2. Ask participants to list the mathematics concepts evident in the children's play. Ask them to notice any or all of the following:
   - How other children contributed or detracted from the exploration of mathematics concepts? (the social context);
   - What an adult said or did that contributed or detracted from their exploration? (the adult role);
   - How the materials and space contributed or detracted from their exploration? (the role of the environment)

Activity: Building Towers Case Study

1. Use Handout 4: The Building Towers Scenario as a guide for this activity.

Reflecting on Mathematics

Have participants reflect on the Mathematics domain using the following independent writing activities:

- Use *Handout 5: Twelve Myths About Math*. Have participants pick one or two myths they identify with, and debunk those myths using information and experiences from this workshop.
- Describe a feature of their own mathematics instruction as a child or adult. What do they remember, and how do they think their early experiences with mathematics influence their attitude and teaching practices today?

The Adult's Role in Supporting this Domain

Adults, teachers, and parents support children's mathematics development in many ways. Using what the group has learned about young children and math, brainstorm a big list of ideas about exactly what adults do to promote mathematical thinking and understanding in children. Make sure the list includes the ideas below:

- Having self-awareness about ourselves as mathematicians ("awakening the genius in your classroom and the mathematician in yourself")
- Possessing a positive attitude and curiosity about math, and conveying both to children

- Gaining knowledge and skill with mathematics materials, concepts and experiences to offer children
- Understanding how children think about mathematics and their common misconceptions about mathematics concepts
- Observing children to understand their interests and abilities
- Reflecting on and interpreting observations of children
- Using observations and reflections to make decisions about how to enhance individual children's learning. This could be as simple as asking a question, or complex as developing a unit of study
- Using correct vocabulary when commenting or providing direct instruction
- Helping children extend their thinking by making comments, asking questions, noticing comparisons
- Supporting children to further their knowledge, interest and understanding
- Using parents as partners, and helping parents understand their roles in supporting children's mathematical thinking

Once the list is complete, ask participants to reflect on thinking about a time when they had a success with mathematics in the classroom. What happened? Why was it successful?

The Role of the Environment in Supporting this Domain

Confirm that everyone is defining "environment" as the space (both inside and outside), materials and equipment, room arrangement, routines and schedule.

Consider this statement:

> "Teachers are...the architects of the environment...they must load the environment so that children bump into interesting mathematics at every turn."

Quote from Copley, J. ed. Mathematics in the early years. Reston, VA: National Council of Teachers of Mathematics and National Association for the Education of Young Children, 1999. (Chapter 4 "Ready to Learn: Developing young children's mathematical powers")

How can you load your home or classroom and playground environment so that children bump into mathematics in meaningful ways? Refer to the list in VELS Pg. 15, and add your own ideas. Or, use the Sandra Stone cartoon in the Supplemental Material section at the end of the module, and write down a few ideas about how to interject mathematics into each area of the room. Or, use a children's book from the children's annotated bibliography to demonstrate how mathematical thinking is inspired by quality children's literature.

The characteristics of optimal environments for supporting mathematics understanding and thinking:

- They are organized and logical
- They are equipped with many kinds of materials

- They display documentation of children's mathematics learning through charts, photographs with captions, and other displays of children's work
- They include opportunities for children to share mathematical discoveries
- They provide clear expectations for use of materials, how and where to put them away, what an area looks like when it is cleaned up (organized), and what a finished product is

Reflecting on the Role of the Adult and the Environment

Have participants complete a reflective writing activity that includes thinking about their past mathematics instructors and learning.

- What/who affected you the most?
- What would you like to emulate?
- What would you like to avoid?
- Where did your learning take place?
- How did the environment or setting influence the kind of learning experience it was for you?

Putting it All Together

The instructor should choose from among the following activities to integrate the information covered in this module.

- **Debating Mathematics:** Set up debate teams. Debate a topic related to early mathematics learning. See *Handout 6: Debating Mathematics*.
  - ? Children need teacher-directed activities to develop their understanding of mathematics concepts because they will not learn this through play.
  - ? Mathematical abilities are genetically predetermined; you are either a born mathematician or destined to struggle with numbers.
  - ? If you had good mathematics teachers as a child, you are a step ahead of those who didn't when it comes to providing rich and inspiring mathematics learning for young children today.
- **Reporter Interviews:** A reporter comes to interview you about why children are learning mathematics in preschool. See *Handout 7: Newspaper Interview*
- **Note to Myself:** On a blank sheet of paper have participants list ten things they will do next week to enhance and support mathematics understanding with their children.
- **Top 10 Reasons to Teach Mathematics to Preschoolers:** Break into small groups and make a list of the top ten reasons to teach mathematics to preschoolers. Groups share and combine their lists with one other group, then present to the whole group.

Conclusion

Instructor should summarize the key points of this module including key points such as:

- Adult attitudes about mathematics affect children's perceptions and learning
- Many adults need to refresh their understanding of mathematical concepts in order to provide meaningful learning opportunities for children
- While children learn about mathematics through play, teachers should be intentional about what, why and how they provide play opportunities and extend children's play to make the most out of these activities

Handout 1: Where Do You Stand?

Materials

None

Room Arrangement

Open space; big enough for participants to stand and form a line from one end of the room to another

Time

10 minutes

Goal

- To have participants become familiar with and personally relate to the topics covered in this module.

Instructor

1. Have participants stand up and move to one side of the room.
2. Tell the group that they are going to form a human continuum, responding as the instructor reads *Handout 5: The Twelve Myths about Math*.
3. Point to the side of the room you want participants to stand if they agree or disagree with the statement (myth). Let them know they may position themselves at any place in the middle or either extreme.
4. Randomly pick individuals to ask them to describe why they put themselves in that spot.

Note ☞ Close this activity by acknowledging the diversity in the group, or that diversity exists outside this group. We acquire attitudes about mathematics based on our experiences in school and home environments. As adults we can change our attitudes and perceptions about ourselves and math. We need to appreciate our influence as role models for children when it comes to learning in general, and specifically in mathematics.

Module 4: Mathematics

Handout 2: How Many Ways Can You Solve 34 + 48

Materials

None

Room Arrangement

Participants should have room to sit in pairs

Time

15 minutes

Goals

- To think "outside the box" of our own educational experiences of learning mathematics
- To experience solving an equation using mental mathematics methods

Instructor

1. Prior to presenting this activity, the instructor should familiarize him/herself with different ways to solve the equation using the background information on the following pages.
2. Introduce this activity as an opportunity to think outside the box that our own educational experiences have created for us. For many of us mathematics is made up of procedures, facts and formulas we needed to memorize. If you were unable to memorize them, you were left struggling. With the following task, you now have the opportunity to break out of that box and try something new.
3. Ask participants to solve an equation using only mental methods, no paper or pencils, just in your head. If possible refrain from using the traditional method of solving the equation. Look closely at the numbers before you begin and try to think of a method that is quick and efficient. Once you've solved it, try to think of another way it can be solved.
4. Present the equation 34 + 48 = on chart paper or on overhead. Make certain the equation is presented horizontally, not in the traditional vertical format.
5. Give everyone a few minutes to solve the equation. Ask for volunteers to orally share their method of solving. Record their solutions on the chart paper or overhead, record as many different strategies as possible, even if they are only slight variations of previous ones. Lead a discussion with the following points in mind:
    - Multiple and non-traditional strategies
    - Demonstration of number sense
    - Developing a deeper understanding of numbers, numerical relationships and operations
    - Importance of learning from one another by listening to each other's strategies.

Background Knowledge

Composing and decomposing methods

Writing out the steps in this process makes this method seems tedious; however, individuals who mentally decompose numbers to add do so fluently and accurately. Often individuals begin to cluster the steps together, increasing their fluency.

34 + 48 =

34 = 30 + 4

48 = 40 + 8

30 + 40 = 70

4 + 8 = 12, because

2 + 2 = 4 so

8 + 2 = 10 and

10 + 2 = 12

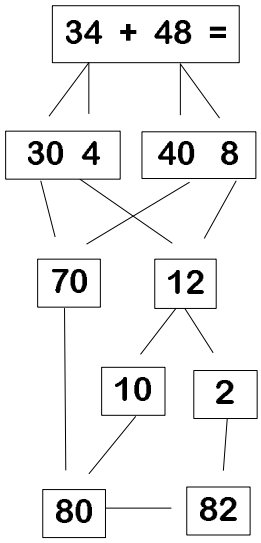
70 + 12 =

70 + 10 + 2 =

70 + 10 = 80

80 + 2 = 82

Here is another representation of the same method:

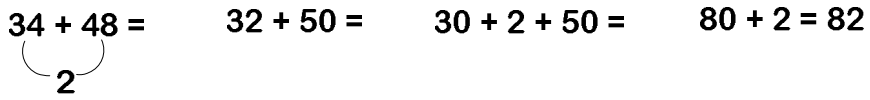


Combining strategies
Many individuals will combine strategies-counting by tens and then composing and decomposing:

Start at **34** and count on **4** tens…**34, 44, 54, 64, 74**.

Then **6** to get to **80** and **2** more to **82**. (Because you can break **8** into **6** and **2**.)

Using landmarks
Some individuals will solve this by thinking about **50**. **48** is close to **50**. If you take **2** from **34** and add it to **48**, you have this equation **32 + 50** which can easily be solved by thinking **30 + 50 + 2 = 82.** This may be represented as follows:



Note

When representing individual's strategies, please be careful to use the "equals" sign correctly. There is a tendency to string equations together. This is an incorrect use of the "equals" sign:

34 + 48 = 30 + 40 = 70 + 12 = 70 + 10 = 80 + 2 = 82

With the definition of the equals sign meaning the "same as", the above equation is incorrect. Writing a new equation for each step will eliminate the incorrect use of the "equals" sign.

Other methods
May include use of manipulatives such as base-ten materials, hundreds charts, number lines, fingers, etc.

Traditional algorithm

$$\begin{array}{r} {\scriptstyle 1} \\ 34 \\ +\,48 \\ \hline 82 \end{array}$$

Research says that when setting up an equation into columns, most individual no longer see each number as a whole, but rather individual digits. If the procedure isn't followed precisely, errors may occur. Students may incorrectly complete the task like the example below because they may not think of **34** as **30 + 4**, and **48** as **40 + 8**, they may not notice that **812** is not a reasonable solution.

$$\begin{array}{r} 34 \\ +\,48 \\ \hline 812 \end{array}$$

Inventing or constructing non-traditional algorithms support a deeper understanding of number.

Handout 3: Marilyn Burns Quote

Otherwise well-educated adults confident and successful in most aspects of their lives make easy confessions at dining tables, "I'm not good at math. I never was any good at math. I hate math!"

Handout 4: Block Tower Scenarios–A Case Study

Mrs. C had decided she was going to be more intentional about the mathematics she wanted her students to explore while playing at the block center. She presented a task that involved students working in pairs to solve a problem in hopes that her students would engage in discourse about their ideas and strategies.

Mrs. C presented that task as follows: I would like each of you to work with a partner at the block center today. Together, you and your partner will choose six blocks to build the tallest tower you can. You can choose any six blocks you would like, but remember, I'd like you to build the tallest tower you can.

Mrs. C thought that this activity would promote discussion among her students which would include choice of blocks, orientation of those blocks and how that would affect the height of the tower. She was also prepared with questions that she would ask to extend her students' thinking such as, "Is that the tallest tower you can build? How do you know? Can you build another tower using six blocks? Is it taller than the first? Why or why not? Is there anything you can do with the blocks in this tower to make it even taller?" Again these questions were intended to help guide students in discovering that the choice of blocks and the orientation of those blocks may change the outcome. Mrs. C had a focused objective and was well prepared to facilitate and extend her students thinking if needed.

Here are two scenarios that occurred during the day.

Scenario 1

Andrew and Thomas were working together to build a tower. When Mrs. C approached she realized that they were adding more than six blocks. She reminded them of the task.

Mrs. C:	*"How many blocks can you use in this tower?."*
Andrew & Thomas:	*"Six."*
Mrs. C:	*"How many blocks are in your tower?"*

Thomas counted pointing first at the bottom block and counting upward.

Thomas:	*"One, two, three…eleven."*

As Mrs. C observed, she noticed that Thomas' count was not accurate. He was not demonstrating one-to-one correspondence.

Andrew:	*"That's not right…there's one, two, three…eight. There are eight blocks."*

Andrew counted with an accurate one-to-one match. Thomas scrunched up his face and stared at Andrew.

Mrs. C:	*"Andrew says there are eight blocks and you said there are eleven, what do you think of that?"*

Thomas counted again, more slowly this time.

Thomas:	*"One, two three…ten…eleven. I'm right!"*

Thomas again did not demonstrate one-to-one correspondence. However, when he reached the top and was on ten he hesitated and then pointed to the top face of the top block and said, "eleven!"

Andrew then dismantled the tower and used a traditional grouping method for keeping track of the count--sliding counted blocks to the left--to show Thomas that there were really eight. But, it wasn't until Thomas mirrored Andrew's actions that he believed him.

Mrs. C observations lead her to learn a great deal about her students. What she learned was not what she had intended to learn, but it was valuable just the same.

- What does Thomas know? What evidence in the above scenario supports this knowledge? What would your next steps for Thomas?
- Answer the same questions for Andrew.

Scenario 2
As Mrs. C approached Peter and Jane she noticed that there were using six blocks, but the building they created was not a tower in which all blocks were stacked on top of one another. The blocks were clustered together with three along the bottom and the others stacked on top.

Mrs. C:	*"That's a very interesting tower. How many blocks did you use?"*
Jane & Peter:	*"Six."*
Mrs. C:	*"Do you remember what your task is today?"*
Jane:	*"To build a tall tower?"*
Mrs. C:	*"Is that a tall tower?"*
Jane:	*"Yes."*
Mrs. C:	*"Is there anyway you can make that a taller tower?"*
Peter:	*"Yes...you can put these on top."*

He took the two of the three from along the bottom and placed them on top.

Mrs. C:	*"What do you think Jane. Is that taller than the first one?"*
Jane:	*"Yes."*
Mrs. C:	*"How do you know?"*
Jane:	*"Because, it has more on the top."*
Mrs. C:	*"Do you think you can choose six new blocks and make an even taller tower?"*
Jane & Peter:	*"Sure."*

Jane and Peter began to collect six new blocks. Mrs. C moved to another group while they built. When Peter and Jane had finished their new tower, she returned.

Peter:	*"See we built a taller tower."*
Mrs. C:	*"How do you know this is a taller tower?"*
Peter:	*"Because it is higher than this one."*

Mrs. C:	*"So higher means taller."*
Peter:	*"Yeah."*
Mrs. C:	*"Jane, how many blocks are in this new tower?"*
Jane:	*"Six."*
Mrs. C:	*"How many blocks were in the first tower?"*
Jane:	*"Six."*
Mrs. C:	*"If they both have six blocks, how can one be taller than the other?"*
Jane:	*"Because some of these blocks are longer."*
Mrs. C:	*"Is there anyway you can make this tower ever taller?"*
Peter:	*"Yes, you can turn this block this way."*

One of the blocks in the middle of the tower had been placed horizontally. Peter turned it vertically, making the tower taller.

Peter:	*"See."*
Mrs. C:	*"So, turning blocks can make your tower taller. Do you think you can choose six blocks to make an even taller tower?"*

Peter and Jane continued to build towers using different blocks and exploring with their orientation.

Mrs. C observations again lead her to learn a great deal about her students.

- What do Peter and Jane know?
- What evidence in the above scenario supports this knowledge?
- What would your next steps be for Peter and Jane?

Handout 5: Twelve Myths about Math

1. **Men Are Better In Math Than Women.**
   Research has failed to show any difference between men and women in mathematical ability. Men are reluctant to admit they have problems so they express difficulty with math by saying, "I could do it if I tried." Women are often too ready to admit inadequacy and say, "I just can't do math."

2. **Math Requires Logic, Not Intuition.**
   Few people are aware that intuition is the cornerstone of doing math and solving problems. Mathematicians always think intuitively first. Everyone has mathematical intuition; they just have not learned to use or trust it. It is amazing how often the first idea you come up with turns out to be correct.

3. **Math Is Not Creative.**
   Creativity is as central to math as it is to art, literature, and music. The act of creation involves diametrical opposites–working intensely and relaxing, the frustration of failure and elation of discovery, satisfaction of seeing all the pieces fit together. It requires imagination, intellect, intuition, and aesthetic about the rightness of things.

4. **You Must Always Know How You Got The Answer.**
   Getting the answer to a problem and knowing how the answer was derived are independent processes. If you are consistently right, then you know how to do the problem. There is no need to explain it.

5. **There Is A Best Way To Do Math Problems.**
   A math problem may be solved by a variety of methods which express individuality and originality, but there is no best way. New and interesting techniques for doing all levels of math, from arithmetic to calculus, have been discovered by students. The way math is done is very individual and personal and the best method is the one which you feel most comfortable.

6. **It's Always Important To Get The Answer Exactly Right.**
   The ability to obtain approximate answer is often more important than getting exact answers. Feeling about the importance of the answer often are a reversion to early school years when arithmetic was taught as a feeling that you were "good" when you got the right answer and "bad" when you did not.

7. **It's Bad To Count On Your Fingers.**
   There is nothing wrong with counting on fingers as an aid to doing arithmetic. Counting on fingers actually indicates an understanding of arithmetic-more understanding than if everything were memorized.

8. **Math Do Problems Quickly, In Their Heads.**
   Solving new problems or learning new material is always difficult and time consuming. The only problems mathematicians do quickly are those they have solved before. Speed is not a measure of ability. It is the result of experience and practice.

9. **Math Requires A Good Memory.**
   Knowing math means that concepts make sense to you and rules and formulas seem natural. This kind of knowledge cannot be gained through rote memorization.

10. **Math Is Done By Working Intensely Until The Problem Is Solved.**
    Solving problems requires both resting and working intensely. Going away from a problem and later returning to it allows your mind time to assimilate ideas and develop new ones. Often, upon coming back to a problem a new insight is experienced which unlocks the solution.

11. **Some People Have A "Math Mind" And Some Don't.**
    Belief in myths about how math is done leads to a complete lack of self-confidence. But it is self-confidence that is one of the most important determining factors in mathematical performance. We have yet to encounter anyone who could not attain his or her goals once the emotional blocks were removed.

12. **There Is A Magic Key To Doing Math.**
    There is no formula, rule, or general guideline which will suddenly unlock the mysteries of math. If there is a key to doing math, it is in overcoming anxiety about the subject and in using the same skills you use to do everything else.

From Mind Over Math. New York, McGraw-Hill: 1979. 30-43. List downloaded from www.swt.edu/slac/math/skills/12Myths.html

Handout 6: Debating Mathematics

Materials

None

Room Arrangement

Teams face each other seated at tables

Time

20 minutes

Goal

To apply the learning in this module by creating arguments responding to debate topics.

Instructor

1. Form participants into teams of 4-5 people.
2. Have each team select a topic from the list below. Assure participants that this isn't a technical debate, but the goal is to represent a point of view and back it up with facts, experiences, information or research that would prove your point.
    - Children need teacher-directed activities to develop their understanding of mathematics concepts because they will not learn this through play.
    - Mathematical abilities are genetically predetermined; you are either a born mathematician or destined to struggle with numbers
    - If you had good mathematics teachers as a child, you are a step ahead of those who didn't when it comes to providing rich and inspiring mathematics learning for young children today.

Note

Assign teams a position either in agreement or disagreement with the statement. Each member of the team should have at least one point to make that represents the argument. The instructor can choose whether to have simultaneous debates taking place, or to have one debate at a time.

If having one debate at a time, assign remaining participants the role of observers.

If having simultaneous debates, circulate among the groups to make sure they stay on task and to answer questions or make suggestions to get them started. Have groups report back.

Module 4: Mathematics

Handout 7: Newspaper Interview

Materials

None

Room Arrangement

Small group seating

Time

10 minutes

Goal

To apply learning in this module by presenting information about the importance of mathematics for young children

Instructor

- Separate the participants into pairs.
- Have each pair select one person to be the reporter and one to be the person interviewed.
- The instructor sets the stage by saying, " A reporter wants to do an article in the local newspaper about children's early mathematics learning. You have agreed to be interviewed because of your recent attendance at an early childhood mathematics conference."
- After each pair has worked independently, have the participants share highlights from their interviews.

Note

Give each pair a few minutes to plan for this interview. The reporter should jot down some relevant and informed questions. Make sure the reporters understand their job is to ask intelligent questions, not questions that a true reporter might ask about a topic of which they have little knowledge. Make sure the interviewees understand it is their job to convey information about the what, where, when, how and why of mathematics for young children.

Mathematics Professional Resources

Chalufour, I., & K. Worth. Building structures with young children. St. Paul, MN: Redleaf Press, NAEYC, 2004.

Clements, D.H. & J. Sarama. Engaging young children in mathematics. NJ: Lawrence Erlbaum Associates, 2004.

Clements, D.H. & J. Sarama. "Math play: How young children approach math." Early Childhood Today, Scholastic Magazine. January/February 2005: 50-57.

Copley, J. ed. Mathematics in the early years. Reston, VA: National Council of Teachers of Mathematics and National Association for the Education of Young Children, 1999.

Dodge, D.T., L.J. Colker, & C. Heroman. The creative curriculum for preschool, 4th edition. Washington, DC: Teaching Strategies, Inc., 2002.

Meisels, S., D. Marsden, and C. Stetson. Winning ways to learn; Ages 3, 4, and 5. New York: Goddard Press, 2000.

Mother Goose Programs. Mother goose cares about math and science. Chester, VT: Vermont Center for the Book, 2004.

Seo, K.H., & J. Taylor-Cox. "What children's play tells us about teaching mathematics" Young Children, 2003 58 (1).

Taylor-Cox, J. Algebra in the early years? Yes! Young Children 2003: 58 (1), 14-21.

Websites

Top Ten Common Myths about Math
www.swt.edu/slac/math/skills/12Myths.html

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Supplemental Material

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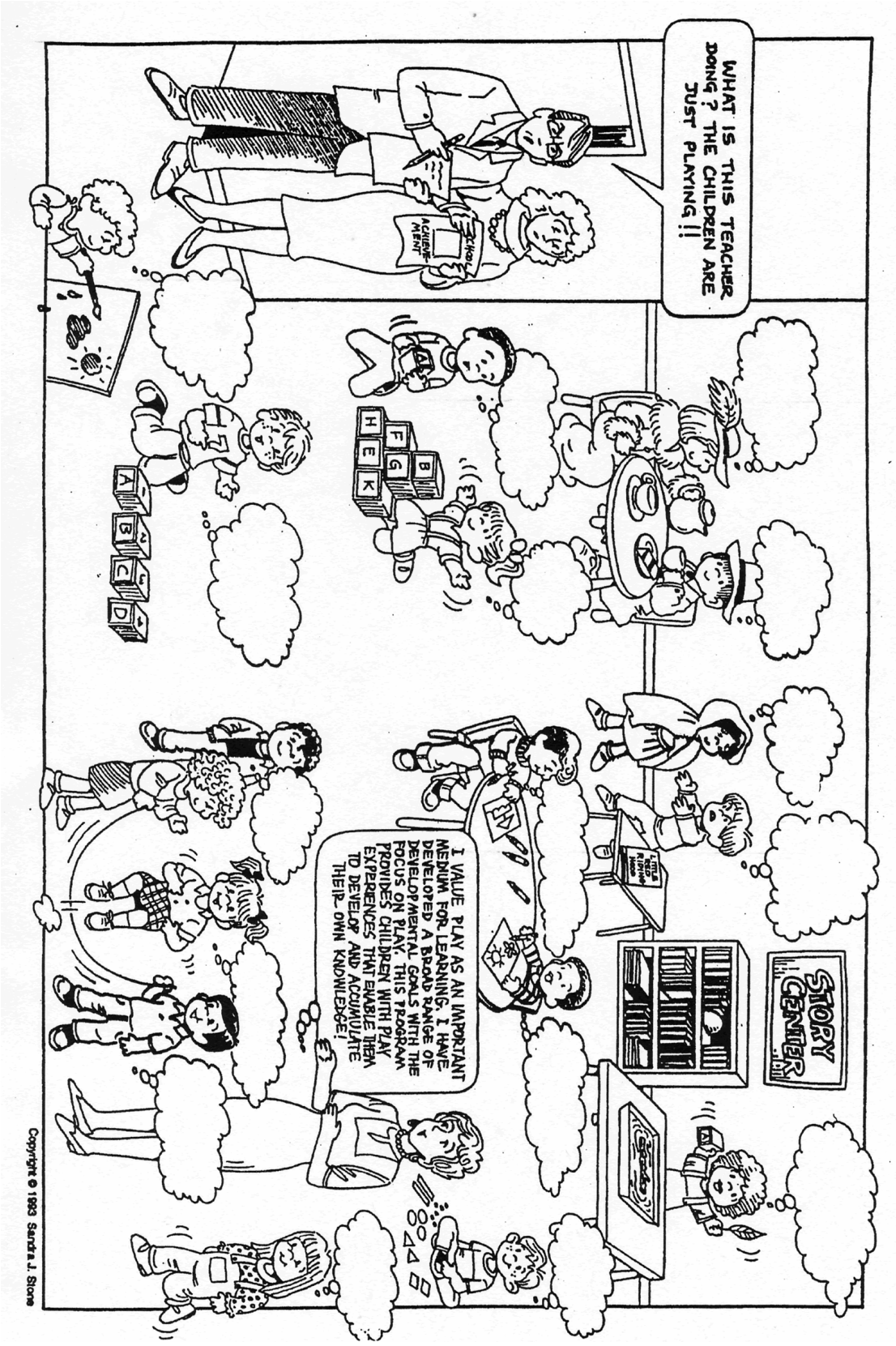
Sandra Stone Cartoon



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Module 5: Science

Materials Needed

- Copies of the VELS
- Handouts
- VCR and videotapes (optional)
- Flip chart, tape, and markers
- Collections of leaves, rocks, shells or other interesting items children explore
- Examples of science tools-magnets, magnifying glasses, tweezers, eyedroppers, flashlights, scales, balances, ramps, etc. (optional

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Understand the process skills of science (also known as science as inquiry)	Teaching and Learning
Recognize when and where science is taking place, both indoors and outdoors and become intentional about offering science learning opportunities	Teaching and Learning
Become familiar with the role of adults in stimulating children's play, curiosity, and knowledge of science	Teaching and Learning; Family and Communities
Recognize how science is connected to other learning domains	Teaching and Learning
Understand children's development of inquiry and how it changes over time	Child Development; Teaching and Learning
Explain science as inquiry to parents and other adults	Family and Communities; Teaching and Learning
Become familiar with professional resources and current research about science and young children	Teaching and Learning; Professionalism and Program Organization; Health and Safety

Note

Page references to the Science domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg. 20. Relevant pages for this module are 16-17, 27, and 31.

Module 5: Science

Introductions and Opening Activity

1. Make sure participants and the instructor introduce themselves, including pertinent information about their work and work settings.
2. Instructor opens this module by acknowledging that traditional high school science instruction is focused on reproducing scientific discoveries instead of directly engaging people in making their own discoveries. Consequently some of us were turned off by science in high school. Many of us learned the scientific method by memorization, and applied it linearly. In actuality, children and adult scientists have much in common–they play around with science; and they make discoveries using a structure that is much more fluid than what we were taught in middle and high school.
3. Choose an opening activity from among the following options:
    - Handout 1: Stringing Along (Pair)
    - Handout 2: Add Water: How Does it Change? (Small group)
    - Handout 3: My Science Autobiography (Individual)
    - Reflect and then brainstorm a list in response to this question: "What did you do today with children that you would call science?" "What did you do in your own life?" (Group)

Review the Standard and Domain

- Have everyone read the Introduction to the Science domain in the VELS, Pg. 16.
- Refer to *Handout 2* (if completed during the opening activities) or conduct the activity in *Handout 2: Add Water: How does it Change?*
- Participants should refer to the VELS Pg. 16 examples column and identify examples from the list that were experienced during the *Add Water: How Does it Change?* activity. Discuss how these examples fit with the VELS Science learning goals.
- Make a list of science action words. These are the process skills of science.

The Development of Scientific Thinking

Instructors should use the following key points to develop a mini-lecture on the topic of the development of scientific thinking in young children:

Children are natural scientists.
They are curious and actively explore their world in order to make sense of it. Early childhood programs offer children an opportunity to expand their explorations and deepen their curiosity while developing theories of how things work, why things happen, and so on. These theories may be developmentally appropriate, but scientifically inaccurate. Adults can provide information, challenge their thinking and strengthen children's understanding of the world around them in an effort to correct children's misconceptions.

Science learning includes knowledge of the process skills and content areas of science.

Process Skills: The process skills are the "hows" of science and include:

- Asking questions like "what's this?" "What happens if...?" "How could I...?"
- Collecting and using data-documenting what they observed in order to explain something
- Communicating information and ideas-sharing observations and results with others through charts, drawings, and conversation
- Designing and making models-building from a plan, creating models
- Estimating and predicting-making informed guesses about quantity, what might happen, cause and effect
- Experimenting-doing investigations and research
- Finding patterns-noticing repeated sequences, organized arrangements, how one thing influences another
- Measuring-in terms of size, weight, length, temperature using standard (numbers) and non-standard units (hands, shoes, books, etc.)
- Noticing change over time-observing and describing how objects and living things change
- Observing-using our senses to notice and explore the world around us
- Recognizing relationships-making connections and comparisons between objects, living things and events in the world around us
- Sorting and classifying-making comparisons and then organizing them into groups and categories
- Using tools of science-exploring with the use of tools such as magnifying glasses, eyedroppers, balances, microscopes, etc.

Content Areas: The content areas are the "what" of science and include:

- Physical Science (Space, Time and Matter)–This involves exploration of the objects, materials and events of the nonliving world in children's everyday lives. It also involves properties of the earth including weather, seasons, night and day, rocks, water, and soil.
- Life Sciences (or the Living World and the Human Body). This involves observing living things and noticing the diversity and variation of living things including plants, animals, humans and other organisms. Areas to study include basic needs, life cycles and dependence on one another and the environment.
- Earth and Space Science (or The Universe, Earth and the Environment). This involves climate, the solar system, rocks, water, night and day, and the seasons.

Aspects of the young child's development that are similar to the attitudes of a scientist include:

- Children are curious-they explore, investigate and want to know why
- Children are persistent-they keep at it until they get a result

- Children want to see evidence-their questions about why things happen can be answered with documentation or real data that is collected when they explore
- Children learn in social groups-constructing new ideas by playing, discussing and working with others is at the heart of what both children and scientists do.

Children's inquiry develops and matures over time.
This is true about life in general, but especially true with regard to scientific inquiry. At first they **notice, wonder and explore** freely with little guidance from adults. Adults may further their inquiry by encouraging them to **ask questions and take action** to answer their questions. With additional support from adults, they may **focus observations and clarify questions** that can provide needed information. With better questions, they engage in **focused explorations** to answer their questions. Together with adults, they can **draw conclusions** and **share their ideas**. (See *Handout #4: Young Children's Inquiry*)

Asking questions is one of the process skills of science.
Helping children form questions and then focus them is a skill for adults to develop. Open-ended questions are the best kind of questions to ask because they encourage higher-level thinking. Some examples of open-ended questions are:

- Comparing questions-what's the same (different) about these?
- Connecting questions-what does this remind you of? Where else have you seen something like this?
- Predicting questions-what do you think will happen if...?
- Evaluating questions-what do you like (dislike) about this? Why?
- Interpreting questions-what do you think about that? What does this mean to you?
- Observing questions-what does it look/sound/smell/feel/taste like? What do you notice?
- Explaining questions-why do you think that happened? Why did you decide to...? How did that happen?

What Does Science Look Like?

What does Science look like and how might teachers observe it in young children?

The process skills of science and the interest in science content areas can be observed in children's play whether or not the adults have intentionally planned a science lesson. While increased intentionality about science instruction is a goal of this training module, it is helpful at this point to observe children's play and identify the processes and content that we would call science.

Activity: What Does Science Look Like?

1. Using visuals of children at play such as videos or video clips, photographs from magazines, journals, calendars or classrooms have participants work in pairs or small groups.
2. Have participants list the process skills they see happening in the videos or images.
3. Using the list they complete, have participants translate their language into the language of the VELS Science examples, learning goals and definitions.
4. Instructors should help participants see the connection between play and the process and content of science. Participants can share their discoveries through group discussion and reporting back.

Reflecting on Science

Instructors should summarize (or ask the group to summarize) what's been covered so far, especially the process and content of science with young children. Choose among the following options for individual writing activities that offer a chance to reflect on one's own practice and assimilate new learning and experiences.

- If you did either of the experiential opening activities, *Handout 1: Stringing Along* or *Handout 2: Add Water: How Does it Change?,* have participants review what they identified as the science in the activity and see if they would add or change anything now.
- Have participants rewrite "My Science Autobiography" and add or edit them based on learning in this module about science process and content.
- Have participants reflect on an interaction they had with a child this week (content of interaction should include questions, answers, discoveries, etc.) Ask, "How would you change that interaction to make the most of a science learning opportunity?"

The Adult's Role in Supporting this Domain

- Refer participants to the list in the VELS, Pg. 17, entitled "Adults Support the Development of Children's Scientific Thinking by…". Ask participants to pick one item from the list that comes naturally to them, and one they would like to develop. Share with a partner.
- Read a children's book, such as *Jody's Beans* by Malachy Doyle (Candlewick Press, 1999) and discuss how this book might be used with children to introduce or reinforce scientific thinking skills.
- Review the concept of open-ended questions. (See *Handout 5: Talk Makes All the Difference,* and *Handout 6: Questioning Strategies*)

  ? In small groups, generate a list of questions about the *Add Water: How Does it Change?* investigation. Make sure you have at least five closed questions,

and five open-ended questions. What kinds of questions would children ask about this investigation?

- Instructors are encouraged to bring in collections of items to explore. Some examples: seedpods, leaves, rocks, or shells. Participants can:
  - ? Explore these items as children would
  - ? Practice developing open-ended questions
  - ? Predict the questions children might ask and then
  - ? Work to focus or clarify the children's questions
  - ? Select some questions that could be turned into a science investigation, then describe the investigation

The Role of the Environment in Supporting this Domain

Classroom and home environments, either indoors and outdoors, can either encourage children's scientific thinking, or miss the mark entirely. The selection, storage and display of materials, the organization of learning centers, and the schedule and time allowed for explorations are examples of aspects of the environment that can be a support to children as they develop scientific inquiry and knowledge.

Activity: Environmental Scan for Science

1. Instructors choose whether to have participants do this individually, in pairs, or in groups of teachers who work together.
2. Make a mental inventory of materials they have that they would call science tools
3. How do the children use these tools? How do they advance the children's scientific thinking?
4. How many different learning centers or areas of the room can these tools be used in? (Example: bringing the balance scale to the book area to see which books are heavier, board books or paperback)
5. What tools or materials would do children use from the outdoors? What can you bring from outside and use indoors? What can you take outdoors that are usually used inside?
6. What do you consider a science tool now that you didn't think of as relating to science before this module?

Instructors should have participants review the list in the VELS, Pg. 17, "The Environment Supports the Development of Children's Scientific Thinking by..." discuss them and add to the list.

Reflecting on the Role of the Adult and the Environment

Instructors should have participants do this as an independent writing activity and then share with a small group.

Think about a theme or unit of study that you do with children every year. Some examples: apple picking, taking a field trip to the pumpkin patch, observing tadpoles, or making soup for a center-wide feast. Answer the following questions:

- Using what you've learned and experienced in this module, how would you make that theme or activity a richer and deeper scientific experience for children?
- How would you introduce the investigation or activity to bring out the science in it?
- What children's books could you use to support the learning in this activity?
- Identify the learning goals and definitions from the VELS that this theme or activity supports.

Putting it All Together

Instructors choose from among the following synthesizing activities, and then have the group share the results:

- The National Science Foundation has awarded a grant to the state of Vermont to distribute $1000 to each early childhood program. How would you use this grant award? Provide a rationale for your choices.
- **Scenario:** You have just made a presentation to your center's board or policy council on a recent field trip to the frog pond. One board member questions your choice of outings, saying that it sounds like a science related activity, and everyone knows preschoolers can't do science. She says science is something children learn in fifth grade. How do you respond?
- **Scenario:** Using the same premise as the one above, how do you respond to a different board member who comments, "Oh I see, that's just playing..." You want to make sure that they understand how the learning goals of the VELS are being addressed by this outing, as a way of strengthening their understanding of the educational program for children.
- **"Science Underway Here":** Participants create statements that can be made into signs to post in the learning centers in their classrooms or homes about the science in children's explorations in each learning center. Have them make a mental inventory of the learning areas in their room, and one or two ways children do science in that area. They may take these statements home and use a word processor or write them out in bold letters so other teachers, parents and volunteers will understand the science learning that is involved in children's play across content and learning areas in a classroom or home.

- Pick an open-ended question from *Handout 6: Questioning Strategies*. Use the question to:
  - ? create an investigation
  - ? identify materials needed to conduct the investigation
  - ? describe how you will model or instruct children to use the tools
  - ? describe how you will document the learning that resulted from the investigation
  - ? describe how you will communicate with families about this investigation and the learning it promoted.

Conclusion

Instructor should lead participants in compiling a group list of what was learned or how their perspectives changed as a result of this science module. Make sure to include

- The process skills and content areas of science,
- The relationship between science and the other domains of the VELS,
- How attitudes and knowledge of adults can support or hinder children's developing scientific thinking,
- The use of questions in promoting scientific thinking
- How adults shape the environment that promotes scientific thinking, skills and knowledge.

Handout 1: Stringing Along

Materials

A set of six strings 18 inches long for every two people, or a couple of balls of string and scissors

Time

15 minutes

Goal

Emphasize open-ended questions and that there are multiple answers to a question

Room Arrangement

Arranged so it is easy to work with a partner.

Instructor

1. Have participants find a partner.
2. Each pair will need a set of six strings about 18 inches long. It is easier and quicker to have the strings cut ahead of time, but it could be a task of the pairs.
3. In each pair, one person holds the strings in the middle while the partner ties two ends together (on the same side of the partner's hand) until all strings are tied. (three sets on each side of the hand).
4. Participants then predict what shape they will have when the hand is released and the string is opened.
5. As pairs make their predictions, illustrate their ideas on chart paper or white board. Then open the strings and see the various shapes that were achieved. Even though everyone followed the same directions there will be different correct answers.

There is no one correct answer, although we are encouraged to support our ideas with what we find out through experimenting and trying out ideas.

Handout 2: Add Water: How Does it Change?

Materials

4-6 objects per group. Suggested objects: a strip of paper towel, a piece of ice, a plastic toy, a small amount of soil or clay, paint, a piece of cracker or cereal. The idea is to have objects that will behave differently when placed in water–creating no change, absorbing water, dissolving or dispersing.

Cups (one cup per object is ideal)

One container of water per table

Room Arrangement

Participants in small groups around tables to share materials, and a have discussion

Time

20-25 minutes

Goal

To have participants conduct a simple investigation, discuss ideas, make predictions and observations

Instructor

1. The instructor should start the activity by saying, "In small groups you will be doing a simple investigation to see what happens when various objects are added to water. "
2. Before adding the water, make some observations of the objects you've been given and make some predictions–what do you think will happen when you put these objects in the water? Have someone in each group write down the observations and predictions you discuss.
3. Next put each object in a cup and add water. Observe what happens. Describe any changes you notice. Can any of the objects be grouped together based on how they change? Write down or make sketches of things you notice.
4. Have the small groups share discoveries with each other. If the small groups have some different objects they can compare and group their findings as a large group.
5. Discussion-How does this activity relate to the VELS, Pg. 16, "Learning Goals and Definitions?"
    - Play-using play to ask questions and discover
    - Science knowledge-using senses to investigate change
    - Science skills & methods-making simple observations, predictions

Handout 3: My Science Autobiography

Materials

Paper and pens or pencils

Time

5 minutes

Goal

To recall influential people and events that shaped participants attitudes toward science learning throughout their lives.

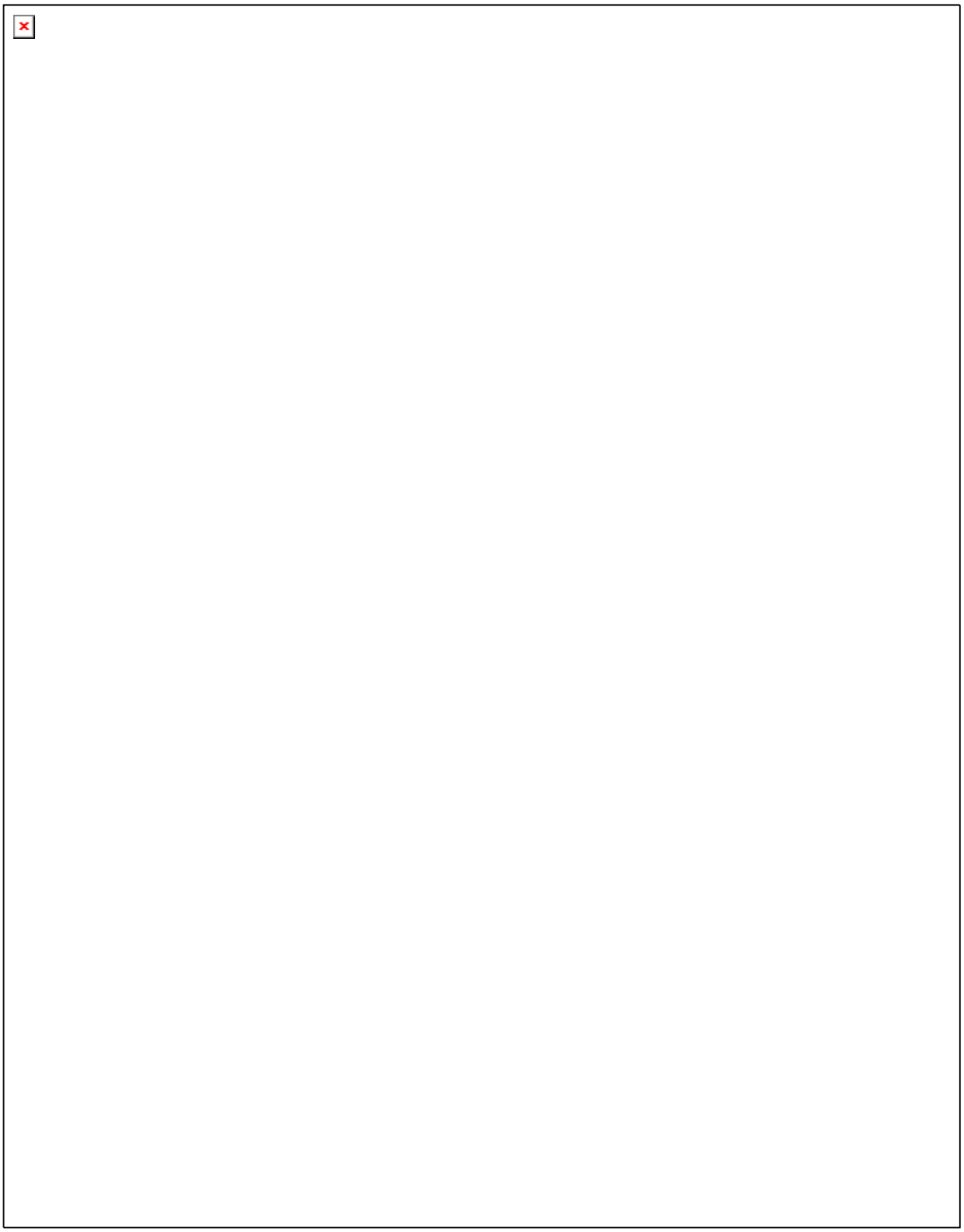
Room Arrangement

No specific set up is required

Instructor

1. Instructor asks participants to recall their early experiences of science in school or other organized instruction (after school activities, camps, etc.) What do you remember about these activities and the people involved? How do you think these activities and individuals influenced your knowledge about science? How do you think they influenced your attitude about science and scientific learning? How would you describe your knowledge, attitude and beliefs about science today?
2. Discussion-The instructor asks participants to share portions of their autobiography and draw conclusions about how their early science instruction shaped their current knowledge, attitudes and approach toward supporting young children's scientific explorations.

Handout 4: Young Children's Inquiry



Hubert Dyasi, CCNY
Karen Worth, Education Development Center, Inc.

Handout 5: Talk Makes All the Difference

Learning happens through social interaction. Talking with others helps us make sense of our own ideas and we learn from the thinking of others.

Here's what you can do to encourage conversations in your sessions:
Be an active listener-make eye contact, paraphrase as you're listening, and ask questions.

Give participants plenty of time to engage their thoughts when asking questions or eliciting comments.

Structure sessions so that participants can talk to each other: in pairs, in small groups and in the large group.

Encourage participants to share their own experiences implementing the program-allow time for participants to comment, offer praise or make suggestions to one another.

Encourage participants to bring in examples of children's work and share successes and challenges.

Encourage educators to increase the level of communication with families through bulletin boards, newsletters, open houses, conferences, and family investigations.

Be available to educators between sessions.

Model open-ended questions for participants and encourage them to use this strategy with children.

Model using math and science vocabulary during sessions.

What are open-ended questions?
If every discussion question you ask elicits a 'yes' or 'no' answer you're not asking open-ended questions.

Learning how to ask open-ended questions takes lots of practice. These kinds of questions encourage higher level thinking. Here are a few examples:

Comparing questions

What's the same about these?

What's different?

Connecting questions

What does that remind you of?

What do you notice about this character that reminds you of someone you know?

Where else have you seen something like this?

What is there about this place that reminds you of this classroom, your home, our town?

What other story have we read that reminds you of this story?

Predicting questions

What do you think will happen now/next/if.. ?

Module 5: Science

Evaluating questions

What do you like about this? Why?
What don't you like? Why?

Interpreting questions

What do you think about that?
What does that mean to you?

Observing questions

What does it look/sound/smell/taste/feel like?
How would you describe that?
What do you notice …?

Explaining questions

Why do you think that happened?
Why did you decide to …?
How did you do that?

From Mother Goose Cares About Math and Science. Vermont Center for the Book, 2004. www.mothergooseprograms.org

Handout 6: Questioning Strategies

Adapted from Jos Elstgeest, "The Right Question at the Right Time," in Primary Science: Taking the Plunge, ed. Wynne Haden, Heinemann Educational Books, 1985.

Questioning is one of the most important tools in guiding and extending student learning. The examples listed here can help you develop your own strategies to enhance your students' investigations and thinking.

Attention-Focusing Questions

Have you seen?.

Do you notice?

What does it do?

What do you see, feel, hear?

These questions help students focus on observation/details as well as connect to the phenomena.

Measuring and Counting Questions

How many?

How long?

How often?

These questions help students develop confidence because they can be answered directly from the activity experience.

Comparison Questions

In what ways are _____ the same/different?

Can you describe an order or pattern to _____?

In what ways can you classify/categorize _____?

These questions can help students to focus their observations as well as to classify/categorize/order the materials or their findings.

Action Questions

What happens if _____?

What happens if you don't _____?

These questions help students explore new materials, properties, forces, and/or events. They can be answered by simple experimentation.

Problem-Posing Questions

Can you find a way to _____?

This question involves students in authentic problem-solving situations. It supports inquiry, critical thinking, and experimentation.

Reasoning Questions

What do you think about _____?

Why do you think that _____?

These questions stimulate students' reasoning and help them draw conclusions and generalizations and to expand or change their ideas. Ask these questions after the students have had the experience they need to reason from evidence.

The types of questions above focus on guiding the children's investigations into the materials and concepts of science activities. It is also important to help them to look at their process of working through an activity and at their own thinking. The following questions have this goal, and are especially useful as writing prompts. (Adapted from Jeanne Reardon, "Developing a Community of Scientists," in Science Workshop, ed. Wendy Saul et al., Heinemann Educational Books, 1985.)

Metacognitive Questions

What have you discovered?

How do you know?

What do you wonder?

What will you do next?

How do you decide what to record?.

What helps you do science?

How do you know when to stop, that you are finished?

Do you ever give up your idea/question/explanation? When? Why?

Science Professional Resources

Chalufour, I., & K. Worth. Building structures with young children. St. Paul, MN: Redleaf Press, NAEYC, 2004.

Colker, L.J. The cooking book: Fostering young children's learning and delight. Washington, DC: NAEYC, 2005.

Harlen, W. and S. Jelly. Developing science in the primary classroom. Portsmouth, NH: Heinemann,1989.

Mother Goose Programs. Mother goose cares about math and science. Chester, VT: Vermont Center for the Book,2004.

Parnella, D. Project seasons. Shelburne, VT: Shelburne Farms Museum,1995.

Worth, K. and S. Grollman. Worms, shadows, and whirlpools. Portsmouth, NH and Washington, DC: Heinemann and NAEYC, 2003.

Young Children. 57(5) September, 2002. This issue is devoted to Teaching and Learning about Science and has many relevant and informative articles..

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Supplemental Material

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Module 6: Social Studies

Materials Needed

- Copies of the VELS
- Handouts
- Flip chart, markers, and tape
- Paper for drawing
- Social studies children's books
- Manipulatives found in early childhood programs
- Blocks, construction paper, grocery store props (optional)

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Understand the Learning Goals and Definitions of Social Studies in the Vermont Early Learning Standards	Teaching and Learning
Be able to differentiate Social Studies from Social and Emotional Development	Child Development Teaching and Learning
Identify, recognize and support social studies action, learning and thinking	Teaching and Learning
Understand how adults use books, materials and conversation to develop children's Social Studies learning	Teaching and Learning Child Development
Understand the role of the environment, both inside, outside, and in the community, to Social Studies learning	Teaching and Learning Families and Community Health and Safety
Be able to talk to parents, colleagues and others about children's social studies learning	Family and Community Child Development
Become familiar with professional resources that support the VELS Social Studies Learning Goals and Definitions	Teaching and Learning Families and Community

Page references to the Social Studies domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg. 20. Relevant pages for this module are 18-19, 26, and 31.

Introductions and Opening Activity

Make sure participants and the instructor introduce themselves including pertinent information about their work and work settings. Instructor can choose from among the following options for an opening activity:

- *Handout 1: Reflecting on Early Social Studies Learning.*
- Group brainstorm: What did you initiate with children this week that you would call Social Studies? What did you see children doing on their own that you would call Social Studies? Chart the group's responses.
- What's in a Name? Repeat introductions, this time include a story about your name. It could be simply "I was named after my father's grandmother", or a more involved story about the origin of your name, or how your name is always misspelled by others, or what happened to your last name when your ancestors immigrated to this country. Make sure everyone has a story to share.
- *Handout 2: Coat of Arms.*
- *Handout 3: Neighborhood Maps.*

Review the Standard and Domain

Give participants some time to read the section on Social Studies in the VELS. Ask them to highlight key words and concepts related to social studies.

Help them connect the learning experiences in the opening activity to the Social Studies Learning Goals, Definitions and Examples. (This may be done as a large group, or in small groups.)

Optional interactive learning activities:

Activity: Finding the Social Studies in Children's Literature

1. Select a book from the Social Studies children's bibliography and read it aloud.
2. Have participants identify Social Studies Learning Goals and Examples from the VELS that are covered in the book.

Activity: Finding the Social Studies in Learning Centers

1. Divide participants into small groups.
2. Assign each group a different learning center or area in the classroom or home environment, e.g., blocks, sensory table, art, outdoors, reading, dramatic play.
3. On flip chart paper, have each group make a list, answering the following questions:
    - What kind of social studies learning takes place in this area?
    - What do children do in this area that you call Social Studies learning?
    - What can teachers/adults do in this area to promote Social Studies learning?
4. Post the charts around the room, and have groups walk around and look at all of the lists, adding new ideas as they go.

Background on Social Studies

Social studies is related to, but different from, social and emotional development. The purpose of social studies for young children is to help them understand and participate effectively in their world. It is the study of how individuals relate to places (geography); the past (history); other people and how they live; and their environment. It is also the study of how individuals contribute to groups such as families, neighborhoods, and communities through making and abiding by rules, understanding and accepting differences, and treating one another with respect, kindness and justice. It is important to know about social and emotional development in young children when exploring social studies learning goals in order to prepare them to be "citizens of a democratic society" (Seefeldt, C. Social studies for the preschool/primary child. Upper Saddle River, New Jersey: Prentice-Hall, 2001

The goals of Social Studies for young children include:

- Development of a positive self-concept, and that while they are different from others, they share some of the same feelings and problems.
- Recognition and understanding of the ways that they as individuals, can contribute to society (or their family, neighborhood or community).
- Acquire the knowledge and understanding of the many cultures, beliefs and values of the individuals who make up our society and the world, and to acknowledge their unique contributions.
- Developing a sense of the past, especially as it relates to themselves as individuals, in order to understand the present and have an appreciation for their heritage.
- Developing spatial awareness of their location in the world beginning with places that are known to them, such as home, school and neighborhood.
- Understanding social, political, and economic forces in developmentally appropriate ways that enables them to see their role and responsibilities in a larger group.
- Developing an understanding and appreciation of the environment and how resources are used and conserved so that there will be enough to go around in the future.
- Understanding of democratic norms and values such as justice, equality, fairness, kindness in their own lives and the lives of their families and friends.

Social Studies Thinking Skills: Use *Handout 4: Social Studies Thinking Skills*.

Questioning and Identifying Problems

- Prior knowledge and understanding
- Supportive psychological environment
- Observant teachers

Locating and Gathering Information

- Direct observation
- Field trips and classroom visitors
- Indirect observation

Organizing information

- Classifying
- Sequencing
- Graphing and charting

Interpreting information

- Reflecting
- Comparing and contrasting
- Personal meaning

Generalizing

- Making links
- Seeing relationships
- Drawing conclusions
- Continuity of experience

Child Development Theorists Support for the Social Studies

Piaget: believed children construct knowledge through maturation and interaction with their social and physical environment. Children think about things differently than adults–they are egocentric, and they need to touch and experience with their senses in order to learn about something.

Vygotsky: believed children's social and psychological worlds are connected, and that interaction with others is necessary for cognitive development. He believed that language is used to regulate and stimulate thought, and that teaching is geared to the "zone of proximal development". This means that what is taught should match what the child already knows and can accomplish independently, as well as with the help and support of others.

Piaget and Vygotsky influenced the way social studies is taught because of their understanding of children. For social studies to be valuable to young children it needs to be:

- Integrated-with children's cultural knowledge, personal background, family, community and within the total curriculum
- Meaningful-appropriate to their development and corresponding to their social, emotional, physical and cognitive maturity
- Of high interest-based in children's first-hand experiences, play, choice and social interaction

What Does Social Studies Look Like?

What does Social Studies look like and how might teachers observe it in young children?

Children's play naturally involves many of the social studies thinking skills. In play children explore their relationship to the environment, to other people and to their community. They use their imagination to transport themselves to other places and other times. By looking closely at the social studies that happen spontaneously in children's play we can learn more about how to be intentional about planning and offering learning opportunities in the domain of social studies.

Activity: Social Studies Scenarios

1. Divide participants into small groups.
2. Use *Handouts 5-11: Social Studies Scenarios*, case examples of children interacting with others and materials in an early childhood program.
3. Have participants read the scenario and answer the related questions as a way to engage them in exploring the idea that social studies thinking happens spontaneously in children's play, and the opportunities for teachers to extend their play and enhance their social studies learning.

Reflecting on Social Studies

Taking into consideration what has been covered so far in this module, and in the Learning Goals of Social Studies in the VELS, the instructor can ask participants to reflect on their teaching style and practice with the following questions:

1. Ask participants to reconsider their curriculum this week. Is there anything else you have done, or noticed the children doing, that you would identify as social studies thinking? Is there anything you would add to the curriculum, or extend to strengthen the learning opportunities for children to explore social studies even more?
2. Have participants talk in small groups about social studies in their curriculum. Have them discuss the following questions: Where do you get your ideas? What works well consistently? How have children used your ideas in ways you didn't expect them to? What are you eager to try or do more of now?
3. Have participants place themselves on a social studies teaching continuum– from novice to expert. Where would they place themselves as of right now? Where would they like to be? How might they get there?

The Adult's Role in Supporting this Domain

The instructor should direct participants to look at the list of adult actions that support social studies learning and thinking in the VELS, Pg. 19.

- In small groups, have participants expand upon that list. Ask them to make the items on the list specific. For instance, "provide ample opportunities for children to explore their surroundings by taking field trips in their neighborhood and beyond" is the first statement. Small groups should refer to the *Handout 4: Social Studies Thinking Skills*, the VELS Learning Goals and

their own teaching practice to answer how, when, with whom, where and what adults do with regard to field trips and neighborhood excursions.

- Have participants add to the list other ways adults support children's social studies learning and thinking.
- See Handout 12: Question Starters

Activity: Open-ended Question Starters (Optional exercise)

1. Have participants brainstorm a list of open-ended question starters. For example, "Do you notice?", "What happens if?", "How did you do that?", or "What does that mean to you?"
2. Give participants construction paper and markers to make reminder signs with their five favorite question starters. These can be posted in their classrooms or homes to prompt them to ask open-ended questions with children.

The Role of the Environment in Supporting this Domain

Early childhood environments play a big role in setting the stage for children to learn and develop the attitudes, knowledge and dispositions of social studies.

The instructor should lead small groups in discussing the merits of the list in the VELS, Pg. 19 under the heading "*The environment can support children's understanding of social studies by…*" and adding new ideas to the list.

Next, have the large group identify some learning centers or areas of the environment they have in common. Assign each small group one area or learning center. Using a piece of flip chart paper, each group should answer

- How does this area relate to social studies?
- What materials can I bring to this area to enhance children's social studies experiences?
- What vocabulary might I use, or what activities could I plan to make this area into a social studies learning center?

Have groups post their ideas on the wall and do a walk-about to see everyone's work. They should take notes or the instructor could offer to type up their ideas and distribute them at a later date.

Reflecting on the Role of the Adult and the Environment

Give everyone a chance to record "take home ideas", or things they want to remember when they go back to their classrooms and child care homes. Have them include:

- Materials I already have that I could use to enhance social studies learning
- Ideas I got from other people
- Steps I will take next week to strengthen social studies in my curriculum

Putting it All Together

Instructor should lead discussion about how the social studies domain connects to other domains of VELS. Where do the participants see overlap?

Activity: Newspaper Article

1. Have each person create a headline that might be associated with a newspaper article on social studies for young children; for example, "Four Year Olds Map the Neighborhood" Or "Preschoolers Recycle Their Lunch Scraps".
2. Pass their headline to the person next to them and have everyone write a short article for an early childhood newsletter.

Activity: Parent Involvement with Children's Social Studies Learning

1. Ask participants how they would communicate with parents about social studies and the Vermont Early Learning Standards.
2. Have individuals, pairs or small groups select a parent involvement medium–newsletter, bulletin board, performance, parent education night, advisory or policy council meeting, or other.
3. Ask them to design an engaging activity that helps parents learn what social studies is for preschoolers and why it is an important part of the VELS and your curriculum.

Conclusion

Instructor summarizes the main points and discoveries made by participants during this module. Be sure to include:

- The goals of social studies for young children
- Social studies thinking skills
- Using questions
- Teacher-initiated and child-initiated activities that promote social studies
- Relationship between social studies and other domains of the VELS

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Handout 1: Reflecting on Early Social Studies Learning

Materials

None

Room Arrangement

Comfortable seating arrangement

Time

10 minutes

Goal

To warm up participants to the topic of social studies by invoking memories of their social studies learning as a child.

Instructor

1. The instructor asks the group to close their eyes and try to go back to your early school experiences. Reflect on the memories they have of learning social studies. What images come to mind?
2. Jot down a few thoughts or draw a picture to express your memory.
3. Follow up with these questions:
    - How would you describe the social studies lesions you experienced?
    - As the learner, what did you do during the social studies lessons?
    - What did your teacher do during the social studies lessons?
    - What did you enjoy about these social studies lessons? What didn't you enjoy?
    - What was effective about learning social studies this way? How could these social studies experiences have been more effective?

Module 6: Social Studies

Handout 2: Coat of Arms

Materials

Coat of Arms hand-outs, markers, list of questions

Room Arrangement

Groups of 5-8 seated comfortably at tables

Time

15-20 minutes

Goal

To have participants independently work on a personal coat of arms and to think about what social studies means to each of us.

Instructor

1. Give each participant a copy of coat of arms template, on the following page.
2. Make sure there are markers on each table.
3. Tell the participants that there are going to create a coat of arms by filling each section with one of the subjects below:
    - a picture that shows family history
    - a life changing event
    - someplace you have visited or some place you would like to visit
    - a special family tradition
    - an historical event occurring in your lifetime
4. When participants have completed their coat of arms, have them share with their small group.

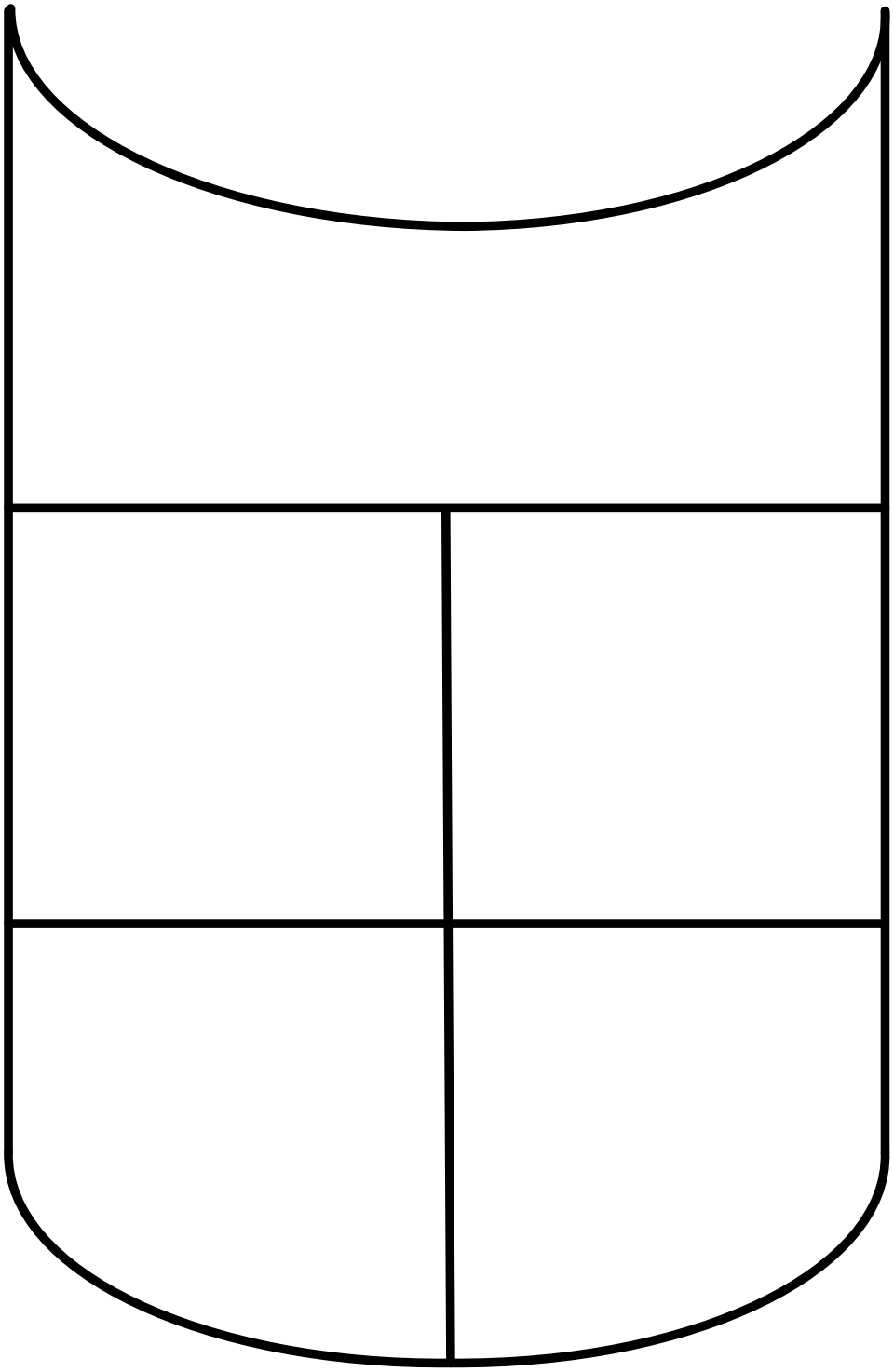
Note

You may want to draw a sample coat of arms outline on chart paper with the specific item to be draw in each section, to avoid multiple questions and to make task easier for participants.

You may also want to share some of the completed coat of arms with the whole group. Noting any common themes.

Discussion: Ask participants to share what social studies means to them?

My Coat of Arms



Module 6: Social Studies

Handout 3: Neighborhood Maps

Materials

Paper and markers or crayons

Room Arrangement:

Tables

Time:

20 minutes minimum

Goal:

To help participants get to know each other by drawing maps of neighborhood walks they took as children and then describing their maps to each other.

Instructor

1. Introduce the activity by saying:

   > "Take a few minutes to think about a walk you took as a child. Make a simple map of this walk including all the buildings and sights you saw. When everyone at your table is finished, take turns describing your maps to each other. Concentrate on what you saw, how you felt as a child and any other details such as "My Mother told me never to go that way, but I did."

2. Watch and circulate as people draw their maps. When it looks like most maps are complete remind participants that it's time to share their experiences.
3. When each person has had a chance to describe his/her map lead a group discussion about what was observed:
   - "Did any of you draw similar maps?"
   - "Did you learn anything new about your colleagues?"
   - "Was it easy to draw the map?"
4. Talk about the memories the maps inspired.

Handout 4: Social Studies Thinking Skills

1. Questioning and Identifying Problems
    - Prior knowledge and understanding
    - Supportive psychological environment
    - Observant teachers
2. Locating and Gathering Information
    - Direct observation
    - Field trips and classroom visitors
    - Indirect observation
3. Organizing Information
    - Classifying
    - Sequencing
    - Graphing and charting
4. Interpreting Information
    - Reflecting
    - Comparing and contrasting
    - Personal meaning
5. Generalizing
    - Making links
    - Seeing relationships
    - Drawing conclusions
    - Requires continuity of experience

Module 6: Social Studies

Handout 5: Social Studies Scenario Instructions

Materials

Handouts 6-11

Room Arrangement

Set up comfortable for working in small groups

Time

20 minutes

Goals

- To identify the social studies action and thinking in typical scenarios of children at play.
- To identify the social studies in children's play, using the learning goals, definitions and examples as described in the VELS.

Instructor

1. Ask participants to imagine the scenario happening in their classroom or program.
2. Identify the social studies learning goals and examples involved in these scenarios.

Instructor may choose to provide groups with the materials described in the scenario (blocks, paint and paper, grocery store dramatic play props) and ask them to act it out.

In that case, have groups assign roles of children, adult, and observers. Children and adults will use the materials and language as described in the scenario, while observers will look for evidence of social studies thinking and actions.

Handout 6: Social Studies Scenario #1

Nancy has used four blocks to make a square on the floor. She has filled it in with smaller blocks in a brick-like pattern and has added several small vehicles. Beside this structure, she has built a square tower (about 18 inches tall) by criss-crossing foot-long blocks. As she places small people figures inside the tower, she says to her friend, "All these people live in here and that big parking lot is for all their cars."

What social studies component(s) and performance indicator(s) are pertinent to this observation? (Please write them out.)

What social studies learning goals are visible? (Refer to the VELS, pages 18-19.)

What social studies thinking is going on? (Refer to *Handout 4: Social Studies Thinking Skills*.)

What might you ask or say to Nancy to extend her thinking and make her aware of her own social studies learning and feel like a social studies researcher?

Handout 7: Social Studies Scenario #2

Michael has connected a combination of straight and curved blocks end-to-end and calls it a road. He has placed small cars and trucks on the road and some miniature street signs along the edges. He holds a small block to his mouth, as if talking into a walkie-talkie, and in an excited voice says, "The cars are speeding. I'm going to arrest them!"

What social studies component(s) and performance indicator(s) are pertinent to this observation? (Please write them out.)

What social studies actions are visible? (Refer to the VELS, pages 18-19.)

What social studies thinking is going on? (Refer to *Handout 4: Social Studies Thinking Skills*.)

What might you ask or say to Michael to extend his thinking and make him aware of his own social studies learning and feel like a social studies researcher?

Handout 8: Social Studies Scenario #3

Rose has put small triangular blocks on top of small square blocks to create six "cabins." (her name for them) The 6 structures are placed in a circle with empty space in the middle. She has put several toy people around. As I pass by, she points to each one and tells me what it is used for: "That one's for cooking. That one's for going to the bathroom. That one's for meetings. And these are for sleeping." I ask, "What were you thinking about as you built this?" Rose replies, "Ya know that Africa book we read? This is the village and now I'm gonna make the fire pit in the middle."

What social studies component(s) and performance indicator(s) are pertinent to this observation? (Please write them out.)

What social studies actions are visible? (Refer to the VELS, pages 18-19.)

What social studies thinking is going on? (Refer to *Handout 4: Social Studies Thinking Skills*.)

What might you ask or say to Rose to extend her thinking and make her aware of her own social studies learning and feel like a social studies researcher?

Handout 9: Social Studies Scenario #4

Tony and Kenneth are talking about their families. Tony: "I have just a mother." Kenneth: "No, you gotta have a daddy! Everyone has a daddy." Tony: "Yeh, I gotta daddy, but he lives far away from here." Kenneth: "Oh. How far away does he live?" Tony: "Real far - not where we live - a place with a different name - I don't know the name, though." Kenneth: "Well, my Grammy lives far away too."

What social studies component(s) and performance indicator(s) are pertinent to this observation? (Please write them out.)

What social studies actions are visible? (Refer to the VELS, pages 18-19.)

What social studies thinking is going on? (Refer to *Handout 4: Social Studies Thinking Skills*.)

What might you ask or say to Tony and Kenneth to extend their thinking and make them aware of their own social studies learning and feel like a social studies researchers?

Handout 10: Social Studies Scenario #5

Tyreesha is painting at the easel. After each stroke of the paint brush, she glances around the room before adding the next stroke. Along one edge of the painting, she paints small black squares. She adds several different shapes over the rest of the paper and intersperses short, straight lines among the shapes. Now she's adding some human-like figures. Patsy walks by and asks, "What's that?" Tyreesha replies, "I'm makin' a map of the classroom to tell people how to get out of there's a fire."

What social studies component(s) and performance indicator(s) are pertinent to this observation? (Please write them out.)

What social studies actions are visible? (Refer to the VELS, pages 18-19.)

What social studies thinking is going on? (Refer to *Handout 4: Social Studies Thinking Skills*.)

What might you ask or say to Tyreesha to extend her thinking and make her aware of her own social studies learning and feel like a social studies researcher?

Handout 11: Social Studies Scenario #6

George is playing in the dramatic play area, which is set up as a grocery store. He's removing food items from the shelves and putting them in a basket. He stops when there's six items in the basket. He gets the clip board and a pencil and jots down several seemingly random numbers. Another child arrives and says, "Can I help you?" George says, "I don't know if I have enough money for six foods, so I'm writin' down the numbers." The other child says, "You should have a calculator!" and departs.

What social studies component(s) and performance indicator(s) are pertinent to this observation? (Please write them out.)

What social studies actions are visible? (Refer to the VELS, pages 18-19.)

What social studies thinking is going on? (Refer to *Handout 4: Social Studies Thinking Skills*.)

What might you ask or say to George to extend his thinking and make him aware of his own social studies learning and feel like a social studies researcher?

Handout 12: Question Starters

Materials

Small bags containing assorted manipulatives and small toys found in early childhood settings

Room Arrangement

Small groups at tables or on the floor

Time

10 minutes

Goals

- To simulate teachers observing and extending children's play through asking open-ended questions.
- To observe for open-ended questions.

Instructor

1. Pass out small bags of manipulatives and play items to groups of four.
2. Have participants pick roles of adult, children and observer.
3. Ask them to simulate children playing with the materials given to them, and have the adult play the role of a teacher extending the child's play.
4. Ask the "child" to use the materials in a playful manner.
5. Ask the "teachers" to try to use as many open-ended questions as possible as they try to extend the child's play.
6. Ask the "observers" to write down words used to start the open-ended questions and notice the difference in the child's response when open-ended questions were asked.

Note

Instructor should set the stage for this activity by asking for everyone's "best behavior". Sometimes when doing simulations, people play the role of the world's worst child/teacher or other character. This provides some humor, but actually makes it harder for the goal of the activity to be achieved. The point here is to experience the asking of open ended questions, not to figure out creative strategies to keep your cool with a challenging child.

Module 6: Social Studies

Social Studies Professional Resources

Copple, C. ed. A world of difference: Readings on teaching young children in a diverse society. Washington, DC: NAEYC, 2003.

Dodge, D.T., L.J. Colker, & C. Heroman. Connecting content, teaching and learning. Washington, DC: Teaching Strategies, Inc., 2000.

Dodge, D.T., L.J. Colker, & C. Heroman. The creative curriculum for preschool, 4th edition. Washington, DC: Teaching Strategies, Inc., 2002.

Mother Goose Programs. Mother goose cares about social studies. Chester, VT: Vermont Center for the Book, 2004.

Seefeldt, C. Social studies for the preschool/primary child. Upper Saddle River, NJ: Prentice-Hall, 2001.

U.S. Department of Education, Office of Educational Research and Improvement. Early childhood: where learning begins–geography. Jessup, MD: ED Pubs, 1999.

"Young learners around the globe". Young Children 59 (5). Entire issue, 2004.

Supplemental Material

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Module 7: Creative Expression

Materials Needed

- Copies of the VELS
- Handouts
- Flip chart, markers, and tape
- 11 x 18 construction paper
- Paint, brushes, tissue paper and glue/gluesticks
- Assorted collage materials
- Clay or play dough and tools

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Be familiar with the VELS Learning Goal, Definitions and Examples in the domain of creative Expression, and how this domain is connected with other domains of the VELS	Teaching and Learning
Understand that creativity is an inherent characteristic of childhood, and that there are many ways children express their creativity.	Child Development Teaching and Learning
Understand the arts as an expression of creativity, culture, and tradition as well as our legacy to the future.	Teaching and Learning Family and Community
Become familiar with a variety of media, techniques, and tools of the creative arts.	Teaching and Learning
Understand that both the process and product of creative expression have value for young children, but that the process of creativity is what is most important to children.	Child Development Teaching and Learning
Develop an appreciation for the forms of creative expression, and a way of sharing that appreciation with children.	Child Development Teaching and Learning
Strengthen the appreciation and recognition of one's own creativity and unique ways of expressing it.	Teaching and Learning Professionalism and Program Organization
Understand the adult's role in supporting children's creative expression.	Teaching and Learning Professionalism and Program Organization
Understand the role of the environment in supporting children's creative expression.	Teaching and Learning
Become familiar with community and professional resources and research on creative expression.	Family and Community

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Be able to describe the development of creative expression to parents, colleagues and other adults.	Family and Community Child Development

Note ☞ Page references to the Creative Expression domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg. 20. Relevant pages for this module are 20-22, 28, and 30.

Introductions and Opening Activity

- Make sure participants and the instructor introduce themselves including pertinent information about their work and work settings.
- Choose from among the following opening activities intended to tap into participant's feelings about creative expression or to use their creative energy:
  - ? *Handout 1: Creating Something From Nothing*
  - ? *Handout 2: Red Light-Green Light The Arts Version*
  - ? *Handout 3: Start with Words*
  - ? *Handout 4: Group Drawing Activity*
  - ? Reflect and discuss with a partner: When did you get the message that you are (or aren't) a creative person? Think back to specific memories if possible. Where were you–at home or school? When do most people identify themselves as creative or not creative? Think broadly-what are your outlets for creativity? Stretch yourself to think beyond what we normally define as creativity; in other words being creative is more than having artistic talents.
  - ? *Handout 5: How Do You Use Your Creative Thinking?*
- Instructors should facilitate a group discussion based on the opening activity chosen for this session.

Review the Standard and Domain

Have participants read the Introduction and Learning Goals and Definitions for this domain (See VELS Pgs.20-21).

If it hasn't been used as an opening activity, have participants complete *Handout 5: How Do You Use Your Creative Thinking* and facilitate a conversation about creativity as an attitude and the balance between *making* something happen and *letting* something happen. Human beings are creative when they imagine something that doesn't exist-including new ideas or solutions to problems. (See For a Child, Life is a Creative Adventure: Supporting Development and Learning Through Art, music, Movement, and Dialogue. Department of Health and Human Services, Administration on Children and Families, Head Start Bureau)

Module 7: Creative Expression

Instructors may choose from among the following options:

- Break into groups of 3-5 and do the *Handout 6: Group Sculpture* activity. Discuss the VELS Learning Goals and Examples that were evident in this experience.

Activity: The Best Example

1. Ask participants to select one Example from VELS Pgs. 20-21 that speaks to them, or that they feel strongly about and are committed to in their work with children.
2. Have them "pitch" this example to the group as if they were trying to persuade others that this is the most important example in the domain.
3. Make sure they include a rationale for their choice, and concrete evidence of how they incorporate this example into their curriculum.

The Development of Creative Expression

Instructors should use the following key points in framing a mini-lecture on the topic of the development of creative expression, many of which originate in an article called "Promoting Creativity for Life Using Open-Ended Materials." by Drew, W.F & B. Rankin. Young Children. 59 (4): 38-45, 2004.

Note ☞ Since there are many creative media and forms of creative expression covered in this domain, instructors may wish to focus on what they have expertise and experience in when presenting this module. Or, they may want to team up so that more than one medium is covered. It is more important to stress that creativity and expression are multi-faceted and connected to all domains of early learning, than to provide an in-depth module on one creative medium.

- The title of this domain is Creative Expression rather than Creative Arts. We might think of this domain as being about the arts, but often people associate that with visual arts. We can't forget that many people express themselves through movement, music, story, drama, ideas and much more. Creative thinking is equally important to this domain as creative arts are.
- Play is the main ingredient in creativity; a sense of playfulness is critical to one's ability to have meaningful, productive lives. Spontaneous and creative self-expression increases children's sense of competence and well being throughout their lives.
- Through play, children also learn to appreciate their own unique approach to doing things, and the approaches of others. Working together to create something, or to solve a problem provides the environment Vygotsky talks about when he describes learning as a social activity.
- Children extend and deepen their understandings through multiple, hands-on experiences with diverse materials. The importance of hands-on learning is a foundation of early childhood education. The tools and materials that support creative expression should go beyond what we commonly associate with creative arts (paint, paper, markers, glue, brushes) to include clay, natural objects,

fabrics, dramatic play props, musical instruments and materials to create musical instruments, and so on.

- Creative expression makes learning in the content areas of literacy, mathematics, science, and social studies meaningful and joyful for children. Teachers provide children opportunities to explore open-ended materials intentionally and with purpose, in order to promote learning in the content areas of early childhood education.
- Teachers are nourished by experiencing children's joy and learning, and when engaged in reflection, they are strengthened in their ability to promote children's creative expression.
- Appreciation of the arts further enhances children's creativity when they have opportunities to experience the art that others create. Early childhood environments should display children's creations, and they should also be places where the works of masters are displayed. The works of composers, painters, dancers, comedians, sculptors and potters and others are appropriate for inclusion in early childhood settings, and offer many rich opportunities for children to develop a vocabulary to share their impressions and opinions, ask questions and show respect for the contributions of others.
- Children develop creative expression at their own pace, but are influenced by the adults and environments in which they live and learn. See *Handout 7: Developmental Stages*.

What Does Creative Expression Look Like?

What does Creative Expression look like and how might teachers observe it in young children? An environment that supports creativity isn't one that is chaotic, where anything goes. It is a thoughtful and planned environment that offers children choices, a variety of materials, and opportunities to express themselves in all areas of the setting.

Activity: Creative Expression in Individual Children

1. Have participants picture all the children in their program.
2. Participants then list the ones they think are the most creative.
3. Ask participants: "What do you see about these children that makes you say that?"
4. Next, list the children you think are the least creative.
5. Ask participants: "What do you see about these children that makes you say that?"
6. Next, have participants picture a part of their room. Ask the following questions:
    - Which children are most creative in this area?
    - What kind of creative expression happens in this area?
    - What are the possibilities for creative expression if I combine different areas of the environment, including the outdoors?

Module 7: Creative Expression

Note

The question, "What do you see that makes you say that?" comes from the Visual Thinking Strategies framework that engages students in observing, thinking, and communicating about visual art and leads to children becoming respectful of differences of opinion and gain conflict resolution skills. For more information, see www.vue.org.

Reflecting on Creative Expression

Select a reflection activity from the options below:

- In pairs, participants share their earliest creative expression memory, positive or negative. If the memory is negative, what could have been done differently to make it a positive experience? If positive, what made it a positive experience?
- Do you consider yourself a creative person? In what ways are you creative? When and how did you get the idea that you are/aren't a creative person?
- Have each person reflect on how their concept of themselves as a creative person, or their earliest memories influences them as teachers of young children.

The Adult's Role in Supporting this Domain

Review the list of ideas on VELS Pg. 22 on ways adults can support children's creative expression. Ask if anyone has different ideas or disagrees with anything on this list.

Do *Handout 8: Rainbow Placemats* activity or create your own scenario for participants to experience supportive or discouraging adult attitudes related to a simple art activity.

The Role of the Environment in Supporting this Domain

Review the list on VELS Pg. 23 of ways the environment supports children's creative expression. Ask if anyone wants to add or disagree with anything on the list.

Have participants complete the checklist in *Handout 9: Does Your Classroom Encourage Creativity* from For a Child, Life is a Creative Adventure: Supporting Development and Learning Through Art, Music, Movement, and Dialogue. Department of Health and Human Services, Administration on Children and Families, Head Start Bureau,

Activity: Materials that Promote Creative Expression

1. In small groups, assign a creative expression medium such as Visual Arts, Creative Dramatics, Music, or Movement.
2. Have participants make a list on flip chart paper of the tools and materials they have in the classroom that promotes creative expression for their respective media.
3. Post the lists on the wall and have people walk around and add to them.

Reflecting on the Role of the Adult and the Environment

Reflect and respond to the following quote from Robert Henri from *The Art Spirit, 1984, Westview Press:*

> "When the artist is alive in any person, whatever his kind of work may be, he becomes an inventive, searching, daring, self-expressive creature. He becomes interesting to other people. He disturbs, upsets, enlightens, and opens ways for better understanding. Where those who are not artists are tying to close the book, he opens it and shows there are still more pages possible."

How does Henri's quote apply to creative expression in young children, the adults who teach and care for them, and the environments in which they live and learn?

Putting It All Together

As instructors prepare to complete this module, they should be thinking about how to bring together the main points and objectives covered during the training. The following activities and scenarios are intended to involve participants in synthesizing their learning:

- Make a plan of action based on the conversations and activities in this module. Develop a concrete plan that addresses how creative expression is a part of their curriculum. Use *Handout 10: Creating an Action Plan*.
- Discuss *Handout 11, Scenario #1: Assistant teacher.*
- Discuss *Handout 11, Scenario #2: Arts Council grant.*

Conclusion

Instructor and participants review key points and identify the most important new learning that occurred. Be sure to include:

- The reason it's called Creative Expression
- The creative process is emphasized more than the creative product, when working with young children
- Adults play a significant role in promoting children's creativity; likewise they can also extinguish a child's creativity and alter his or her self-concept with long-lasting effects.
- Appreciating creative expression in others is an important component in this domain. Children should have the opportunity to be exposed to a wide variety of creative expressions, including the masters as well as the work of other children.

Module 7: Creative Expression

Handout 1: Creating Something from Nothing

Materials

Boxes or bags of odd materials. Each collection should contain materials with a deliberate omission of an important item, (e.g., one collection could contain berry baskets, paper, ribbon, beads but no scissors or tape. Another could contain pot lids, glass jars, sticks, but no spoons, lids or beans

Room Arrangement

Groups of 3-5 seated comfortably at tables.

Time

15-20 minutes, depends on your group

Goals

- To have participants work in small groups to experience both the creative process and the creation of a product.
- To have participants experience creative expression in a collaborative fashion.

Leader

1. Pass out a set of materials to each group.
2. Groups can only use what they are given to complete the creative task. They can not borrow from other groups or use materials outside of what they are given, including materials they may have brought with them.
3. The limits for the activity are:
   - This must be a group project
   - Use only the materials that you were given
   - Stick to designated time limit
4. Possible follow-up questions might include:
   - How did it feel to be required to produce a product?
   - How did it feel working as a group?
   - How did it feel having a limited supply and variety of materials?
   - When you were told to create a product, what did you first think of? A song, poem, picture, sculpture...? Tangible or intangible?
   - How did you respond to the materials given to you?
   - Did you follow the rules?
   - Were you missing a tool/materials that you really wanted? How did this feel?

Handout 2: Red Light, Green Light, the Arts Version

Materials

Large paper and marker or blackboard

Room Arrangement

Open space large enough for the whole group to move freely

Time

20 minutes

Goal

- To involve the whole group in a creative movement activity that enhances knowledge of art concepts

Leader

1. Working with the entire group, generate a list of some art concepts such as *line, sharp, texture*, etc.
2. Next list some examples of each under the different headings. For example under texture, you might list *smooth, bumpy, rough,* etc.
3. Explain that you are going to take some of these art concepts and use them in a movement game that they may remember from children called Red Light, Green Light. Refresh their memories about the way the game is played.
   - One person is the leader and stands at one end of the room or hallway.
   - All the other participants stand together at the other end of the room.
   - The leader chooses a concept discussed earlier, for example, *bumpy*. The other participants have to move in a way that demonstrates *bumpy,* with the goal of being the first one to touch the leader.
   - The leader stands with her back to the group and when she says "green light," the participants may move towards her, and when she says, "red light," they must freeze.
   - The leader keeps looking over her shoulder to assess where the others are. She may send someone back if that person moves after she says "red light".
   - People may also be sent back if the leader thinks that person isn't moving "bumpy enough".
   - The first one to reach the leader is the winner and the next leader. Then that new leader picks another art concept for people to move like.
   - The game continues until everyone has had a chance to be the leader, or until the participants seem to tire of it.

This activity comes from Robin Fawcett.

Module 7: Creative Expression

Handout 3: Start with Words

Materials

An assortment of materials for creating–paper, yarn, fabric, markers, crayons, play dough or clay, stamps, etc. for the visual arts; drums, bells, tambourines, scarves, a selection of music etc. for music or movement. Materials can be anything that participants can use for creating.

Room Arrangement

Large work table if working with the visual arts; large open area for music or movement.

Time

20-30 minutes approximately–could do in a shorter time frame, too.

Goal

To acknowledge the creativity in everyone and to highlight the concept that you don't have to be an "artist" to be considered creative. Creativity involves using the familiar in new ways–as this exercise will show.

Leader

1. Put individual words such as anger, strength, power, quiet, curiosity on pieces of paper. Any descriptive word is fine. Alternately, put individual lines from a poem on pieces of paper.
2. Participants can work individually or in small groups of 2-3. Each individual or group picks a word or line from a poem.
3. The goal of the exercise is to use the word or line from a poem as a stimulus to create something from the available materials. If working in small groups, participants are to collaborate and create one piece of work.
4. When the work period is over, solicit feedback from the group about the process that they used to go from a word on a piece of paper to a piece of completed work. If participants have worked in groups, solicit feedback about how they collaborated? What was the hardest part of collaborating? What was the best part of collaborating?

Handout 4: Group Drawing Activity

Materials

Art postcards of a variety of art works-a mix of famous artists and local artists if possible, still lives, landscapes, portraits, abstracts, etc. Have enough for everyone.

Markers, pastels, crayons

White drawing paper, 9 x 12 or 12 x 18, enough for 3 sheets each

Pushpins or masking tape

Room Arrangement

Tables and chairs, with a large blank wall or open floor space

Time

30-45 minutes

Goals

- To help participants overcome fears about drawing by participating in a non-judgmental, non-threatening drawing activity
- To view a variety of artist's work
- To learn more about how viewpoint and personal interpretation of artwork can vary among individuals

Leader

1. Have participants select a postcard, some drawing materials and three sheets of paper.
2. Explain that they are going to use this image as a starting point for a drawing of their own. Participants are not expected to re-create the image, but rather to use it as a jumping off point for their own drawing. For example, they could take one element of the artwork such as a tree and expand on that, or choose one color they like and do an entirely new drawing using that color.
3. Explain that there will be a short time limit for completing their drawing and this will keep things fresh and spontaneous. The time limit also helps them to not get hung up on trying to recreate the artwork. Start at the same time, and allow five minutes for them to work.
4. After five minutes, stop them, and collect the postcards. Then have them swap drawings with each other so everyone has a different person's drawing.
5. Now repeat the exercise again with a new piece of paper, this time using the drawing they just received as the jumping off point, just like they did with the postcard. Have participants start at the same time and work for five minutes again. They can change drawing materials if they wish, or use whatever they used before.
6. When the time is up, collect the drawings they were working from, and keep them in a pile marked #1.

7. Have participants swap drawings again, and repeat the process one more time, using this new drawing as the starting point and drawing for five minutes. They may switch materials if they choose.
8. Collect the drawings and keep them in a pile marked # 2, and collect the drawings they did last and mark that pile #3.
9. Take the postcards used for the first drawings and put them up on the wall in such a way that the drawings can fit under them in rows. If there isn't enough wall space, lay them out on the floor.
10. Take the drawings marked #1 and have participants volunteer to help place them under the postcards they were generated from. Repeat this process with the drawings marked #2 and #3, placing them under the drawings they came from.
11. Spend a few minutes looking at the whole display and then discuss the process. How did it feel? What was it like to have a time limit? What did they learn from this exercise? What could you teach with this exercise?

Handout 5: How Do You Use Your Creative Thinking? – A Checklist

	Yes	No
Do you add ingredients to written recipes?		
Do you mix and match the color of your clothes for a different look?		
Do you tap your feet to the beat of a rhythm?		
Do you sing in the shower? car? or anywhere?		
Do you ever write verses that rhyme? or don't rhyme?		
Do you arrange food so it looks beautiful to you?		
Do you discover shapes in clouds?		
Do you doodle?		
Have you ever lost the sense of time when doing something fun?		
Do you dress up (or make children's costumes) for special occasions?		
Do you take time to look for and make something that the receiver will really enjoy when selecting or making a present?		
Do you use gestures, voices and facial expressions when telling a joke?		
Do you dance by yourself when hearing a song you like?		
Do you sometimes wake up with a solution to a problem you've had for some time?		
Do you enjoy having fresh cut flowers in your home?		
Do you enjoy watching a beautify sunset?		

If you responded "Yes" to several of these questions, you demonstrate flexible, creative thinking in several different ways.

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Handout 6: Group Sculpture

Materials needed:

Clay (1 to 2 lbs. per person) or play dough (grapefruit-sized piece per person)

Piece of plywood, stiff cardboard or other sturdy surface

Words on small pieces of paper and a container to pick a word out of (see leader instructions below.)

Room Arrangement:

Small groups with table space for each group, approx 3 feet square or larger.

Time:

25 minutes

Goals:

- Use clay to create a group sculpture
- Work in a spontaneous manner as children do.
- Identify the VELS Learning Goals that relate to this creative experience.

Leader:

1. Have participants form groups of 4-6 people. Each group sits together with a work surface of approximately three feet square.
2. Have someone from each group pick a word or theme out of the hat. Explain that they will collaborate to create a scene or sculpture on the theme they draw out of the hat. Allow about 15 minutes for the creation segment. Sample themes:

Circus	Farm
Zoo	Food
Under the ocean	Playground
Sesame Street	Snowy day

3. Facilitate the whole group in moving around the room to look at each sculpture. Model the kind of critique discussion you would like teachers to use with children.
4. Encourage people to ask questions of the artists, such as “tell me about this part” or “what is this animal doing?” or comments which describe details you see such as “the tiger looks ready to pounce” rather than comments which compare one person’s part with another.
5. Encourage discussion and questions about the process of working together to create the group sculpture. How did it work to be given a theme as a starting point? How would it be different if the group had been asked to create a theme and then build around it?
6. Ask participants to give examples of how this activity connected with VELS learning goals in the Creative Expression domain. Give examples of other domains this activity could address. Were some domains not addressed?

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Handout 7: Developmental Stages

The following chart summarizes the growth and development of young infants, mobile toddlers, and preschoolers. It is important to remember that children develop at their own pace and that within each age group children acquire skills at different times. The chart lists approximate age ranges rather than precise times when children acquire the listed skills.

	Social Emotional	Cognitive	Language	Art	Music	Movement & Dance	Drama/Play
Young Infant (Birth to 18 mos.)	Knows primary caregiver. Learns to expect the caregiver to respond to his/her signals in a predictable way. Responds to own name	Repeats own actions on objects. Imitates simple, familiar gestures. Retrieves a partially-hidden object.	Communicates through crying and other actions. Coos and smiles with adults. Begins babbling.	Visually follows slowly-moving objects. Shows sensitivity to changes in brightness. Prefers patterned to solid color forms.	Distinguishes among sounds. Shows preference for human voices and music. Enjoys listening to rhymes and songs while being rocked, stroked, patted.	Hits dangling objects. Claps and moves body in response to music. Loves dancing while being carried.	Imitates facial expressions and actions. Centers on own actions (waving arms, kicking legs). Plays with objects by exploring them. Responds to puppets and stuffed animals manipulated by an adult.
Mobile Infant (8 to 18 mos.)	Gets attached to persons) responsible for care. Cries when a stranger approaches. Begins to do things by him or herself.	Finds a completely hidden object, demonstrating awareness that objects exist when out of sight.	Responds to words and begins to use language to communicate needs ("milk," "play"). Says "da-da" and "ma-ma."	Holds large crayons and scribbles sponta-neously. Explores to gain control of line pressure, color, directions.	Enjoys listening to music with rhythm and being sung to. Plays pat-a-cake and sings very simple songs. Enjoys sounds of rattles, bells, and music boxes.	Enjoys bouncing motions. Crawls, walks. Moves rhythmically when he or she hears recorded music.	Loves to play with objects. Shows interest in handling & playing with objects such as hats, shoes, belts.

	Social Emotional	Cognitive	Language	Art	Music	Movement & Dance	Drama/Play
	Looks at pictures in a book	Uses a tool (such as a stick) to obtain object of sight.	Points to what he or she wants and to pictures.	Tries different ways of using paintbrush.			Begins to play simple games (hide and seek). Can demonstrate how to do something ("how do you wash your hands?").
Toddler (18-36 mos.)	Learns to play with other children. Learns to do things without help (independence). Begins to accept some limits.	Uses simple objects to represent other objects. (For example, a box may represent a bed). Begins to think about something before doing it.	Asks many questions. Speaks using groups of words. Begins to communicate feelings and ideas.	Scribbles with crayons and washable markers in a more controlled way. Makes wavy lines/ circles with finger paints. Is naturally drawn to art activities.	Discovers cause and effect of sound when banging or shaking objects or toys. Enjoys the repetition of songs, stories, and instrumental sounds. Sings simple traditional songs and sometimes combines them with improvised songs.	Sways, claps, marches to music. Recognizes rhythms and begins to reproduce them. Imitates movement of others in response to instructions such as "move like a tree," "roll like a barrel."	Begins to enjoy dramatic or make-believe play usually revolving around familiar themes, such as housekeeping. Uses props that are realistic. Loves to imitate others. Plays his or her own game alongside of peers. Enjoys acting out parts of stories with an adult.

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	Social Emotional	Cognitive	Language	Art	Music	Movement & Dance	Drama/Play
Preschooler (3-5 years)	Learns to play with other children. Is eager for new experiences (initiative). Plays cooperatively with peers, can take turns and observe rules. Expresses feelings verbally.	Imitates an action some time after observing it. Understands concepts such as numbers, size, weight, color, texture, distance, time and position. Focuses on one aspect of things at a time.	Talks in complete sentences. Can retell a familiar story or invent a new one. Talks to him/herself to guide dramatic play. (For example, says, "now we are going to eat" to the doll.)	Begins to draw things and name them. Colors pictures as he or she wishes. Draws objects that float all over the page.	Has a large repertoire of songs. Enjoys creating songs when playing. Enjoys performing alone as well as in a group.	Pretends with movements to be a horse, a rabbit, a butterfly. Creates and performs traditional dances. Is able to maintain a steady beat accompaniment.	Acts out stories using realistic props. Begins to enjoy playing house or playing doctor with other children. Elaborates and expands pretend play, developing fantasy themes that involve many actors and often continue for several days. Enjoys participating in teacher-initiated drama activities.

Sources:

Andress, B. Music for Young Children. Orlando, FL: Harcourt Brace,1998.

Davidson, J. Emerging Literacy and Dramatic Play. NY: Delmar Publishers, 1998.

Head Start Bureau, Nurturing Children, Training Guides for the Head Start Learning Community. Head Start: Washington, DC

Lally, R. A Guide to Social Emotional Growth and Socialization. CA: Dept of Education, 1990.

Lasky, L. and Mujerji,R (1982) Art: Basic for Young Children. NAEYC: Washington, DC, 1982

Task Force on Children's Learning and the Arts. Young Children and the Arts: Making Creative Connections. Washington,DC: Goals 2000 Art Education Partnership, 1998.

Handout 8: Rainbow Placemats for Everyone

Materials

11 x 18 construction paper

Scissors

Tissue Paper

Glue or glue sticks

Paint (tempera or water colors)

Paintbrushes

Room Arrangement

Participants should have tables to work at.

Time

15 minutes

Goals

- Engage in a creative product-oriented activity.
- Experience supportive and encouraging comments from an adult
- Experience discouraging comments from an adult.
- Experience using poor quality tools that are necessary for completion of a project.
- Identify attitudes and tools that promote children's creativity.

Leader

1. Distribute construction paper and tell participants they are going to simulate an art exploration similar to one that would take place in an early childhood program. Tell them they are going to make Rainbow Placemats as part of their unit on The Sky, which they will use during snack and mealtimes.
2. Show them an example of a placemat you created to give them an idea of what they will have completed.
3. Have glue, brushes, tissue paper, and paints available around the table for them to share. Mix in some tools and materials that are of poor quality such as scissors that don't cut well; paint that is too drippy; and dried up glue or glue sticks.
4. Begin with encouraging comments that communicate your confidence that they will make a beautiful placemat that will express their unique gifts of creativity. Offer your assistance with obtaining and sharing the materials.

5. As they proceed in creating their placemat, shift to using unsupportive comments that communicate a hidden agenda: that there is a right or wrong way to make a rainbow; or that compares one person's work to another, or to the model you presented. Make comments that communicate time pressure and a need to finish this activity in order to cover everything in the workshop.
6. End by praising and displaying certain placemats and critiquing others.
7. Close the activity by identifying how the leader's supportive or discouraging comments influenced the participant's feelings about their work, creativity and self-concept.

Handout 9: Does Your Classroom Encourage Creativity?

	Yes	No
Do adults model creativity with activities such as singing made-up songs and creating stories using puppets?		
Do adults incorporate children's interests or unexpected events into the curriculum?		
Are a variety of materials that can be used in different ways, appropriate for the ages and developmental levels of the children, available and periodically replenished?		
Are both handmade and commercially-made materials available, such as musical, instruments, dress-up clothes and props, collage materials, and different types of paints?		
Are children free to choose to play or not to play in the special interest area or to engage in a particular activity?		
Do children have a place where they can leave unfinished creations and continue working on them at a later time?		
Do children have age-appropriate opportunities to participate in guided group activities, such as listening to music together, engaging in directed and free-style music, dance, movement, and dramatic activities, or reading and acting out a story?		
Are preschool children introduced to new ideas and projects by adults who ask questions and brainstorm with them?		
Are all children provided with opportunities to be successful?		
Are children given opportunities to learn, communicate, and express themselves through art, music, dance, dramatic play, drama, and language?		
Do adults encourage and support children's creative expression by getting down to the children's level, describing their activities, and asking open-ended questions?		
Are projects that can be completed in only one way (including coloring books, paint-by-number), avoided?		

The more questions you responded “Yes”, the greater the potential that your classroom environment nurtures creativity.

Module 7: Creative Expression

Handout 10: Creating an Action Plan

Adult attitudes and behaviors to strengthen in support of creative expression	Adult attitudes and behaviors to diminish that discourage creative expression	Changes to my environment and equipment, including resources	By when	How will I know I'm successful

Handout 11: Scenarios

Scenario #1
Your new assistant teacher is great with the children, and you are happy to have her in the program. One day she comes to you and says, "please put me anywhere but in the art area—I really can't draw a straight line".

Scenario #2
Your local arts council approached you as director of your early childhood program and asked you to apply for a $5000 grant to develop an arts enrichment program. What would you want to include in this proposal? Make sure you address materials, professional development and community resources you would access in your arts enrichment program. Provide a rationale for your proposed activity.

Art Supplies List

Aleene's Tacky Glue
Art gum, pink pearl, and kneaded erasers
Ballpoint pens
Beads, feathers, sequins
Binder clips
Brads
Brayers, rubber ones like Speedball
Buckets for mixing plaster—flexible plastic
Burlap and/or canvas pieces for putting down on tables for clay work
Cardboard scraps
Clay tools, cookie cutters, sculpting tools, extruders for clay
Colored construction paper, various sizes
Crayola washable tempera paint (don't skimp here, Crayola is best)
Crayons-regular colors, fluorescent, glitter
Drawing pencils (ebony are nice)
Duct tape
Eyedroppers
Fabric paints and markers
Fabric scraps
Foam core scraps
Gel pens
Glitter
Glossy coated paper for marker work
Glue sticks
Good pencil sharpener with different sized holes
Good quality pottery clay
Masking tape and colored masking tape
Mat board scraps
Metallic markers
Needles and thread
Oak tag in white and colors
Oil based clay in a variety of colors
Oil pastels
Pan watercolors
Paper clips
Paper donated and scrounged
Plaster gauze
Plaster of Paris
Plastic containers for water and paint
Plastic trays, sheets of Plexiglas or cookie sheets for printmaking
Plastic water pitchers
Play dough
Printmaking paper with texture
Regular colored pencils
Scissors-Fiskars are best and well worth the price
Regular & double-sided Scotch tape
Scratch art paper
Scratch foam sheets for printmaking
Sharpie permanent markers
Small plastic containers for casting plaster—flexible plastic
Spray bottles
Staplers and staples
String
Student grade acrylic paints in bottles
Student grade watercolor paper
Variety of brushes for watercolor and tempera
Washable markers in large and fine point
Washable white glue
Water based printmaking ink (Speedball is good)
Watercolor pencils
White drawing paper, various sizes
Wire in variety of colors and thicknesses
Wood scraps
Yarn

This list was developed by Jude Bond

Creative Expression Professional Resources

Edwards, C.P. & K.W. Springate. Encouraging Creativity in Early Childhood Classrooms. Urbana, IL: ERIC Digest, 1995.

Drew, W.F & B. Rankin. "Promoting Creativity for Life Using Open-Ended Materials." Young Children. 59 (4): 38-45, 2004.

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For a Child, Life is a Creative Adventure: Supporting Development and Learning Through Art, music, Movement, and Dialogue. Department of Health and Human Services, Administration on Children and Families, Head Start Bureau,

Von Oech, R. A Whack on the Side of the Head: How to Unlock Your Mind for Innovation. New York: Warner Books, 1983.

Henri, R. and M. Ryerson. The Art Spirit: Notes, Articles, Fragments of Letters and Talks to Students, Bearing on the Concept and Technique of Picture Making, the Study of Art Generally, and on Appreciation. Boulder, CO: Westview Press, 1958

Visual Understanding in Education. What is VTS? http://www.vue.org/whatisvts.html

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Supplemental Material

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Module 8: Physical Development & Health

Note ☞ It is expected that instructors will have expertise in one or both of these major topics-Physical Development, and Health. It may be important to select two instructors who have complementary experience and expertise.

Materials Needed

- Copies of the VELS
- Handouts
- VCR and videotapes (optional)
- Flip chart, tape, and markers
- Children's books on physical development and health

Goals and Objectives

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
Define health broadly, to include physical, oral, behavioral, nutritional, and environmental health, safety and injury prevention, and topics related to wellness	Health and Safety
Define motor development broadly, to include fine and gross motor skills as well as the role of perceptual-motor and sensory-motor development to the acquisition of motor skills	Child Development
Recognize factors that contribute to or inhibit children's physical development and health	Health and Safety Child Development
Understand the connections between children's physical development and health and the other domains of the development referred to in the Vermont Early Learning Standards	Child Development Health and Safety Teaching and Learning
Describe ways to support children's physical development and health in a variety of environments including the home, child care, playgrounds, and public spaces	Child Development Health and Safety Teaching and Learning
Understand the relationship between observing, assessing and individualized planning to promote children's physical development and health	Teaching and Learning Health and Safety
Understand how to communicate with and support families, colleagues and other adults in supporting children's physical development and health	Family and Community Health and Safety
Describe ways to provide children with opportunities to	Health and Safety

Module 8: Physical Development & Health

As a result of this module, participants will:	*Related Northern Lights Core Knowledge Areas*
learn and practice healthy habits	Teaching and Learning

Note Page references to Physical Development & Health domain in the Vermont Early Learning Standards in this module are noted as: "VELS" followed by the page number. For example, VELS Pg. 20. Relevant pages for this module are 23-24, 28, and 31.

Introductions and Opening Activity

1. Make sure participants and the instructor introduce themselves including pertinent information about their work and work settings. Review the agenda, layout of the facility and pertinent training logistics.
2. Pick one of the following opening activities.
   - *Handout 1: Where Do You Stand?*
   - *Handout 2: Fondest Memory*
   - Take a moment to think of a physical activity you enjoyed as a child. Recall who was involved, where it took place, what you enjoyed most about it, when you did it/learned to do it, and anything else that was important about it. Do you still enjoy this today? Write down your recollections and share with the person next to you.

Activity: Taking Care of Your Health

1. Have participants make a list of all the things they do now to take care of their own health.
2. Then on another sheet of paper, list the things they would like to start doing to take care of their own health.
3. Have participants notice the difference in the lists.
4. Star the items on the list that they do with children in their program.
5. The instructor can ask the group if they would like to share their lists.

Review the Standard and Domain

Give participants time to read and review the section on Physical Development and Health, VELS Pgs. 23-24.

- Using the opening activity selected for this group, have them draw connections between their memories or current practice, and the learning goals and examples in this domain.
- Focus the group on the list of examples. Have each person jot down the examples they observed that day: what happened, who was involved, what the adult did.

- Divide the participants into small groups and complete one or all of the following:
    - **Quick Pitch:** assign each group a different learning goal. Give them time to review that learning goal and corresponding examples. Then have them make a pitch (brief presentation) about why their learning goal is important to children's physical development and health.
    - **Adding to the examples:** assign each group a different learning goal. Thinking about children you know, and what happened recently in your program, what examples would you add to this learning goal?
    - **Rewriting the examples:** how would you change, add to or take away from the list of examples if you were describing a young three year old? An older five year old?

Background on Physical Development & Health

Instructors should use the following key points to develop a mini-lecture on the topic of the background of physical development and health.

Good early childhood education programs integrate the elements of this domain throughout the day and all the seasons of the year, and involve staff, families and the community. Having only one or two health themes during the year is similar to being on a diet, when you go off the diet, you often revert back to old patterns of eating. When you integrate physical development and health into whatever you do with children, staff and families, lifelong benefits accrue. You don't have to be "on the diet" or in the middle of "health month" to keep health at the forefront.

In a similar vein, the VELS considers physical development and health in broad terms. Physical development refers to growth; the principles of development; the gross and fine motor skills as well as the sensory and perceptual –motor experiences that contribute to the acquisition of skills. Health refers to an individual's overall well-being, not just the absence of illness. It includes physical, oral, behavioral, nutritional, and environmental health, safety and injury prevention, and topics related to wellness.

The following are key points that the instructor may use as background information on the domain It is expected that instructors will have expertise on one or both major topics–physical development, and health. It may be important to select two instructors who have complementary experience and expertise.

Maslow's Hierarchy of Needs: places the basic needs of physiological survival and well-being at the first level. These needs are what we typically define as health needs: food, shelter, clothing, warmth, rest, and hygiene. Humans need to have their basic needs for physiological and psychological well-being and safety met before they can progress to meeting their higher level needs and thinking. Similarly, children must have their basic needs met in order to learn and thrive in early childhood education programs.

The hierarchy of levels of need are as follows:

Level One	Physiological survival and well-being
Level Two	Physical Safety and psychological security
Level Three	Love and belonging
Level Four	Self-esteem and self-worth
Level Five:	Self-actualization and how one thinks about oneself

D**evelopment in young children comes through bursts, pauses and regressions**: The Developmental Framework of Touchpoints tells us that a child may have a burst in language development, while physical development (or some other area of development) is on hold. Or a burst in development in one area may cause disorganization within the child, and the child's system of care (child/family, and child-caregiver/teacher). This disorganization could happen when the child learns something new or masters a skill and spends much of their time practicing that skill to the exclusion of other well-formed interests. This can result in the adults surrounding the child feeling they are not as successful in anticipating or understanding their child's needs, and lead to self-doubt. The Touchpoints model is designed to emphasize prevention through anticipatory guidance and development of relationships between parents and providers.

Principles of motor development include the following:

- Development typically proceeds in a head to toe direction (cephalocaudal)
- Development typically starts close to the center of the body and proceeds outwards toward the extremities (proximodistal)
- Children initially use two-sided support and move to one-sided support, thus allowing them to engage in freer use of one hand or foot.
- Development typically proceeds sequentially. Each step is a building block for later steps
- Children gain control of their bodies first by lying down (front or back) and then in the upright position (sitting or standing). In each of these positions children start flexing (bending) and extending (stretching) their bodies. Later they develop rotation (twisting). For example, infants first lift their heads (flexing and extending) before rolling over (rotation).
- Development typically proceeds equally on both sides. Later in the sequence of motor development, children develop the ability to do different things with the left versus the right side of the body. Examples are holding a jar while unscrewing the lid; drawing while holding the paper; kicking a ball; and skipping.
- Perceptual motor development is the awareness of one's body in space. It is just as important to consider how a child moves as it is to be familiar with the kinds of movement skills they have. How children plan their movement, maneuver around and through objects and obstacles, remember how to move their body from one time to another, and imitate movements are all part of perceptual motor development.

- Sensorimotor development is the relationship between movement, motor skills and sensory awareness and experiences. Taste, touch, smell, sight and sound are ways children experience the world around them. The combination of sensory information and how the brain takes in and organizes this information is called sensorimotor development. Some children are more sensitive than others to sensory input. The amount of noise, visual stimulation, number of bodies in the room, or texture of their clothing can be either soothing or overwhelming to children–or both.
- Fine Motor development refers to the development of the smaller muscles of the face, hand and feet. This develops sequentially after the child gains some control of the larger muscle. For example, after a child learns to sit up and use her arms to reach and pull, then she learns to separate her fingers and poke (9 months). Fine motor activities include such things as licking a Popsicle; being able to stand on tip toe; picking up a raisin; and winding up a toy.
- Vermont Data on Children's Health and Well-being (Use current data from the Vermont Department of Health (http://www.healthyvermonters.info/) and Department of Education (http://www.state.vt.us/educ/) on the following topics
    - ? Food insecurity and hunger
    - ? Obesity
    - ? Kindergarten readiness survey on the health indicator
    - ? Immunizations
    - ? Oral health
- Guidelines for physical activity for preschoolers from the National Association for Sport and Physical Education, 2001:
    - ? Preschoolers should accumulate at least one hour of daily structured physical activity
    - ? Preschoolers should engage in unstructured physical activity whenever possible and should not be sedentary for more than one hour at a time.
    - ? Preschoolers should develop competence in movement skills that are building blocks for more complex movement tasks.
    - ? Preschoolers should have indoor and outdoor areas that meet or exceed recommended safety standards for performing large-muscle activities.
    - ? Individuals responsible for the well-being of preschoolers should be aware of the importance of physicals activity and facilitate the child's movement skills.

What Does Physical Development & Health Look Like?

What does Physical Development and Health look like and how might teachers observe it in young children?

Early childhood educators are good resources of information about children's health because they observe the children on a regular basis, when they are healthy and when they are under the weather. They also have many opportunities to observe children's movement and motor development in the context of age-appropriate activities and routines that are part of the program's curriculum.

Observing Children's Physical Development
Instructors may select a video clip to show children in action; provide questions to consider when viewing it with the group; and then facilitate a group discussion about what was observed. Some questions you may want to include:

- What fine motor movements did you see?
- What gross motor movements did you see?
- How do you see perceptual motor skills in practice?
- Focus on a child who you think is "gifted" in physical development. Describe the child's movement.
- Focus on a child who you think may struggle in the area of physical development. Describe the child's movement.
- Which children appear to be deriving joy from movement and physical activity?
- Which children appear to be avoiding, struggling or frustrated with physical activity?

If you don't have a video clip to show, ask the participants to think about their own group of children, and ask the questions above. Additional questions the instructor might ask include:

- What are children doing when you see them using fine motor skills in your classroom, or in a home?
- What are children doing when you see them using gross motor skills in your classroom, or in a home?
- What are children doing when you see them using perceptual and sensory motor skills in various settings?

Observing Children's Drawings
Children's drawings and artwork give a glimpse into their fine motor development. How children hold a pencil, the angle of the child's paper, the position of their head while drawing, and the way they use their other hand gives clues to their overall motor development, including fine motor and perceptual-motor development.

Use the examples of children's drawings (in the supplemental resources) to discuss the following concepts:

- Light vs. hard pressure
- Control of the writing utensil
- The arrangement of the figure on the page

- The number and type of body parts you see
- Which drawings are by children who are developmentally young? Developmentally older? How do you know?

Observing Children's Health and Well-being
Using photographs of groups of children, ask participants to pick a child who looks healthy and one who doesn't look healthy.

- What are the signs of health? What looks like health to you?
- What are the signs of a poor state of health? What looks like poor health to you?
- What other questions would you want to answer before going any further in your observations and assumptions about these children?

Reflecting on Physical Development and Health

Early childhood educators are important adult role models for children when it comes to physical development, health, and well being. Our behavior and attitudes about health and activity are on display even when we aren't intentionally trying to teach something. Being aware of these behaviors and attitudes is crucial to helping children develop their own positive health habits that last a lifetime.

Opportunities for reflection:

- Reflect on your own health and activity status. How do you build on and use your strengths and interests regarding physical development and health with children? How do you transcend your own challenges regarding physical development and health to ensure children get a balanced and well-rounded experience?
- Given that you are a role model for children about health and well-being, what are children learning from you about physical development, health and healthy habits?

The Adult's Role in Supporting this Domain

Adults are more than role models for children in physical development and health; they play an active role in creating learning opportunities to develop movement and motor skills, healthy habits and an integrated curriculum that makes health a part of everything children do. They are also in a position to communicate with families about children's health and well being, advocate for children's health through local, state and national initiatives, and use community resources to improve children's health and physical development whenever possible.

Instructors can explore the adult's role in supporting children's physical health and development through the following activity options:

- Make a list together of all the healthy habits that can be instilled in an early childhood program, or through home visits. Then categorize the list according to the learning goals of the VELS.
- Look at the list on VELS, Pg. 24 summarizing what adults can do to support children's physical development and health. Expand that list by adding specific activities, routines, parent involvement/communication activities, children's

books or music, or other appropriate means of implementing the idea with children.

- Discuss and facilitate a conversation about how educators and parents and guardians have meaningful communication about physical health and development. What are the opportunities and what are the barriers to open communication on this topic? How have people overcome the barriers? How might the VELS be useful in communicating with families about physical development and health?

The Role of the Environment in Supporting this Domain

Home and classroom environments can support, or inhibit, children's physical development and health. The environment of the community can also be seen as a supporter or inhibitor of physical development and health. Schedules, rules and guidelines, time, and materials are components of the environment in a child's eye. The availability, accessibility and safety of playgrounds, open spaces, and indoor public spaces (libraries, playgroups, health provider's offices, etc.) where children and families gather should be considered as resources that can enhance children's development.

Instructors may select from the following activities:

Activity: Reflecting on Rules

1. Have participants make a list of some of the rules they have for children in their program.
2. Next to each rule, write how the rule supports, or inhibits, physical development and health.
3. After the lists are complete, the instructor can facilitate the group sharing ideas about rules.
4. During the group discussion, brainstorm how to use, reconsider, and revise rules to make them more conducive to promoting physical development and health.

- Brainstorm myths about gross motor activities (you need lots of space, can't do it indoors, etc.) Then dispel the myths by creating alternative statements that demonstrate promotion of physical activity, health and healthy habits.
- What are some incentives or motivators that are meaningful to children about physical development and health? How do music, scents, products, other children, materials, etc. contribute to helping children develop physically, stay healthy and create positive health habits?
- List ten ways to incorporate gross motor activities indoors, and then try them right in the workshop setting. List ten ways to incorporate fine motor activities outdoors.

Reflecting on the Role of the Adult and the Environment

Instructors choose from among the following activities designed to give participants a chance to reflect on new information and insights, and consider how they will incorporate them into their practice as early childhood educators:

- **Create an action plan:** List five ideas they will take home and implement; include what resources (material and personal) they need to make their plan a reality, and when they will implement the plan.
- **Reflection on being a role model:** Contemplate how you have been a role model for children in the area of physical development and health. What messages have you sent? What messages would you like to start sending? What do you need to accomplish or change in your own life in order to model the approach to physical development and health you would like children to see?
- **Refection on using parents and guardians as a resource:** How have you successfully involved parents/guardians in promoting children's physical development and health? What were some unsuccessful or missed opportunities with parents? What would you do differently if you had a chance to do it over?

Putting it All Together

Instructors should select from the following activities intended to help participants synthesize and integrate what they've learned:

Activity: Integrating Physical Development and Health into the Curriculum

1. Break participants into small groups.
2. Assign each group a different domain of VELS.
3. Have the groups turn to the pages in VELS of their domain, and discuss the opportunities to observe and integrate learning opportunities related to physical development and health.
4. Participants can list their ideas on flip chart paper, and then post their papers on the wall around the room.
5. The small groups walk around the room and read the charts, adding their own new ideas to the lists posted.
6. Facilitate a large group discussion about opportunities and challenges to integrating health and physical development throughout the curriculum.
7. Have participants select three integrations they will try in their own programs.

Activity: The Bobby Scenario

1. Have participants use *Handout 3: The "Bobby" Scenario* to identify the assumptions we make about children and their families related to physical development and health; and to identify questions for further inquiry.

Conclusion

Instructor should summarize the key points and ask participants which objectives have been met and why. Ask participants to state key "take-home" ideas as they complete this module. Make sure to include:

- Health is broadly defined to include behavioral, oral, physical, nutritional, and environmental health, along with wellness topics such as safety and injury prevention
- Integration of health and physical development into everything you do
- The important role of the adult in modeling healthy habits and well-being
- Relationship between fine motor, gross motor and perceptual-motor development
- Gross motor activities can be done anywhere, not just outdoors or in wide-open spaces

Handout 1: Where Do You Stand?

Materials

None

Room Arrangement

Open space; big enough for participants to stand and form a line from one end of the room to another

Time

10 minutes

Goals

- To have participants get warmed up to the topic
- To have participants personally relate to the topic

Instructor

1. Have participants stand up and move to one side of the room.
2. Tell them they are going to form a human continuum, responding to the instructor's prompts by placing themselves somewhere on the continuum or at one of the extreme ends. Prompts can include the list below or instructors can add their own:
   - I am best described as a couch potato/amateur athlete
   - I'd be happy on a deserted island with unlimited junk food/organic vegetables
   - My perfect weekend activity would be dinner and a movie/biking to a lake and swimming across it
   - I'm most comforted by the smell of bread in the oven/having my head massaged
   - My motto is "an apple a day keeps the doctor away"/"life is short, so don't deny yourself"
   - I am graceful and coordinated/lucky if I can walk and chew gum at the same time
3. Close this activity by acknowledging the diversity in the group, or that diversity exists outside this group. We acquire habits or are born with temperaments leading us in one direction or another and as adults can appreciate or decide to change our lifestyles. Either way, we are role models for children about physical development and health.

Handout 2: My Fondest Memory

Materials

Pencil and paper, optional

Room Arrangement

Any

Time

10 minutes

Goals

- To have participants recall a memory that involved their senses
- To warm up participants to the connection between sensory experiences, memory and learning

Instructor

1. Ask participants to get comfortable in their chairs or move to a more comfortable position in the room.
2. Have them close their eyes and spend 2-3 minutes recalling a fond memory that involved their senses. Encourage them to remember the setting, including the sounds, textures, light, smells, taste and what they saw.
3. Give participants an opportunity to jot down their memory on paper if they wish.
4. Offer them the opportunity to share their memories with the group. Ask the group how many senses were involved in your memory? Was this memory about predominately one sense? Or did it involve more than one sense? Does this sense stand out for you as the one you are most influenced by?

Note

People may be able to identify themselves as visual, auditory, or kinesthetic learners. Knowing how we experience sensory input can help understand the importance of sensory-motor experiences for children.

Handout 3: Bobby Scenario

Materials

None

Room Arrangement

Small groups

Time

20 minutes

Goals

- To identify the assumptions we make about children and their families related to physical development and health.
- To identify questions and areas for further inquiry into the physical development and health of a child in an early childhood program
- To have participants practice using the learning goals of the VELS to assist in planning for a child like "Bobby"

Instructor

1. In small groups, give them the Bobby scenario and ask them to answer the questions as completely as possible.
2. Ask participants how can VELS be a support to them in thinking about Bobby?

Scenario:

Bobby is a four-year-old boy in your preschool classroom. He will be five in two months. Frequently Bobby comes to school without a lunch, and although you are more than happy to provide some healthy food for him from your supply of snack, you worry that he isn't getting enough to eat on those days. This week, Bobby has brought lunch to school—a sweetened juice drink, chips and packaged muffins one day; "lunchables" another day, and some cereal in a baggie on yet another day.

Bobby's eyes are crusty, and he has dark circles around them. His nose has been drippy for weeks, and although he uses tissues to wipe his nose, he isn't adept at it yet. He likes to drop the used tissues into the water table to watch the paper disintegrate – you admire the scientist in him, but wonder about the health of the water supply in the water table!

Bobby doesn't come to the art table by his own choice. Once you saw him make some marks on a paper and you came over to see what he was doing. He said "I'm drawing my mom" and his picture looked like this:

Some questions for discussion might include:

- What assumptions do you make about Bobby's health and his family's values around physical development and health?
- What questions do you have that would help you understand how to support Bobby's physical health and development through your actions as a teacher and the preschool environment?
- How would you communicate with Bobby's family about his physical development and health?

Physical Development & Health Professional Resources

Aronson, S. Healthy young children: A manual for programs. Washington, D.C.: National Association for the Education of Young Children, 2002.

Brazelton, T.B. Touchpoints: Your child's emotional and behavioral development. Reading, MA: Addison-Wesley, 1992.

Brazelton, T.B & J.D. Sparrow. Touchpoints three to six: Your child's emotional and behavioral development. Cambridge, MA: Perseus Publishing, 2001.

Bredekamp, S. and Copple, C. Developmentally appropriate practice in early childhood programs. Washington, DC: National Association for the Education of Young Children, 1997.

Dodge, D.T., L.J. Colker, & C. Heroman. *The creative curriculum for preschool, 4th edition*. Washington, DC: Teaching Strategies, Inc., 2002.

Sanders, S. Active for life: Developmentally appropriate movement programs for young children. Washington, DC: National Association for the Education of Young Children, 2002.

Schikedanz, J.A., and R.M. Casberge. Writing in preschool: Learning to orchestrate meaning and marks. Newark, DE: International Reading Association, 2004.

Web Sites

Action for Healthy Kids

http://www.actionforhealthykids.org

Centers for Disease Control and Prevention, Recommended Childhood and Adolescent Immunization schedule-www.cdc.gov/nip

Food Insecurity and Hunger in Vermont

Vermont Campaign to End Childhood Hunger-http://www.vtnohunger.org/

National Association for Sport and Physical Education
http://www.aahperd.org/NASPE/template.cfm?template=toddlers.html

Preventing Childhood Obesity

Preventing Childhood Obesity: Health in the Balance

http://www.iom.edu/report.asp?id=22596 for the report

http://www.iom.edu/focuson.asp?id=22593 for fact sheets

Shaping Americas Youth

http://www.shapingamericasyouth.com

Vermont Department of Health

http://www.healthyvermonters.info/

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Supplemental Material

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Resources

Annotated Children's Literature Bibliography

This annotated bibliography contains children's literature supporting the Vermont Early Learning Standards.

Approaches to Learning

Schwartz, Amy. *Annabelle Swift, Kindergartner.* Scholastic, 1988.
Annabelle is prepared for kindergarten by older sister Lucy but Lucy's advice leads to problems.

Hutchins, Pat. *Changes, Changes.* Macmillan, 1971.
Pat Hutchins shows, but does not tell, how blocks become whatever a child at play imagines.

Russo, Marisabina. *The Big Brown Box.* Greenwillow, 2000.
Sam's favorite toy is a big cardboard box that he makes into a house, a cave and a boat but it's difficult for him to share the fun with his little brother.

Schaefer, Carole Lexa. *Someone Says.* Viking, 2003.
Join this lively group of Asian children as they imagine their way through the day, becoming ponies that prance, birds that swoop and tigers that slurp.

McCully, Emily Arnold. *Mirette on the High Wire.* Putnam, 1992.
A traveling high wire performer stays at her mother's boardinghouse and Mirette dreams of learning how to walk the tightrope.

Russo, Marisabina. *The Line-Up Book.* Greenwillow, 1986.
Sam lines up blocks, books, boots, cars, and other objects.

Steig, William. *Brave Irene.* FSG, 1986.
When her mother falls ill, indomitable Irene fights a raging snowstorm to deliver a dress in time for the duchess.

Kraus, Ruth. *The Carrot Seed.* HarperCollins, 1973.
A little boy plants a carrot seed. His mother, father and big brother agree that it won't come up but the little boy knows better.

Provensen, Alice and Martin. *The Glorious Flight.* Puffin, 1987.
A biography of the man who designed the first heavier-than-air machine to fly across the English Channel.

James, Simon. *Little One Step.* Candlewick, 2003.
As three duckling brothers cross forest and field trying to get back to their mother, the older ones encourage the youngest to keep going, one step at a time.

Skorpen, Liesel Moak. *We Were Tired of Living in a House.* Putnam, 1999.
When three siblings decide they want to move, they try living in a tree house, a raft, a cave and a sandcastle.

Social and Emotional Development

Fox, Mem. *Koala Lou.* Harcourt, 1994.
A young koala works hard to gain her mother's attention.

Hutchins, Pat. *There's Only One of Me.* Greenwillow, 2003.

Resources

Mother's daughter, sister's sister, uncle's niece - there are so many things to be when relatives are coming to your birthday party!

Lester, Helen. *Tacky the Penguin.* Houghton, 1988.
Tacky the penguin does not fit in with his sleek and graceful companions, but his odd behavior is an asset when hunters come with maps and traps.

Lionni, Leo. *A Color of His Own.* Knopf, 1976.
A chameleon searches for his own color and finds a true friend.

Falconer, Ian. *Olivia.* Atheneum, 2000.
Whether at home getting ready for the day, enjoying the beach, or at bedtime, Olivia is a feisty pig who has too much energy for her own good.

Kuskin, Karla. *I Am Me.* Simon and Schuster, 2000.
A little girl has her mother's eyes, her father's hair and her aunt's funny little toe, but she's also wonderfully herself.

Ashley, Bernard. *Cleversticks.* Crown, 1991.
Ling Sung realizes that his know-how with chopsticks is a special skill.

Schertle, Alice. *Down the Road.* Harcourt, 1995.
Hetty is careful with the eggs she bought at the store, but she runs into trouble when she stops to pick apples.

London, Jonathan. *Froggy Gets Dressed.* Puffin, 1992
Rambunctious Froggy hops out into the snow for a winter frolic, but is called back by his mother to put on his clothes.

Graham, Bob. *Max.* Candlewick, 2000.
What's a family of superheroes to do when their progeny is slow to develop his flying skills?

Bang, Molly. *When Sophie Gets Angry, Really Really Angry.* Blue Sky Press, 1999.
Sophie's temper flares when her sister demands a turn playing with a favorite stuffed gorilla.

Emberley, Ed. *Go Away, Big Green Monster.* Little, Brown, 1992.
Children can assemble a big green monster and then make it go away again.

Everitt, Betsy. *Mean Soup.* Harcourt, 1992.
Horace feels really mean at the end of the day, but his mother has a cure.

Vail, Rachel. *Sometimes I'm Bombaloo.* Scholastic, 2002.
Five-year-old Katie is a good kid - most of the time. But sometimes she gets so mad she's Bombaloo.

Shannon, David. *No, David.* Scholastic, 1998.
Children will know all the words in the story of bad behavior and parental love.

Keats, Ezra Jack. *Louie.* Greenwillow, 1975.
Louie never speaks until he meets Gussie, the puppet.

Raschka, Chris. *Yo! Yes?* Orchard, 1993.
Two lonely characters meet on the street and become friends.

Havill, Juanita. *Jamaica and Brianna.* Houghton Mifflin, 1993.
Two friends allow envy to undermine their friendship.

Howe, James. *Horace and Morris but Mostly Dolores*. Atheneum, 1999.
Three mice friends learn that the best clubs include everyone.

Lobel, Arnold. *Frog and Toad Are Friends*, Harper, 1979.
Whether telling stories, taking walks, or writing letters, Frog and Toad always help each other out as best friends should.

Silverman, Erica. *Don't Fidget a Feather.* Sagebrush, 1999.
A pair of competitive waterfowl has a freeze-in-place contest until a fox happens by.

Fox, Mem. *Wilfrid Gordon McDonald Partridge.* Kane/Miller, 1985.
A small boy tries to discover the meaning of "memory" so he can restore the memory of an elderly friend.

Wells, Rosemary. *Yoko*. Hyperion, 1998.
Yoko's schoolmates make fun of her Japanese sushi at lunchtime.

Carle, Eric. *A House for Hermit Crab.* Simon & Schuster, 1991.
Hermit Crab outgrows his first shell house, and then the next, so he must keep moving on.

Millman, Isaac. *Moses Goes to School.* FSG, 2000.
Children can spend a day with Moses who goes to a special school for the deaf.

Torres, Lela. *Subway Sparrow*. FSG, 1997.
When a sparrow becomes trapped in a subway car, language barriers are overcome as people work together to free the bird.

Rosen, Michael. *This is Our House*. Candlewick, 1998.
George won't let any of the other children into his cardboard box house but when the tables are turned, he finds out how it feels to be excluded.

Language, Literacy and Communication

Langstaff, John. *Oh, A-Hunting We Will Go.* Aladdin, 1991.
Old and new verses of the folk song about hunting and capturing animals and then letting them go.

Stock, Catherine. *Where Are You Going Manyoni*? HarperCollins, 1993.
A young girl sees wild birds and other animals on the walk to school. Set in Zimbabwe.

Zelinsky, Paul. *Wheels on the Bus*. Dutton, 1990.
The wheels on the bus go round, the wipers go swish, the doors open and close in this movable-book version of the classic song.

Taback, Simms. *There Was an Old Lady Who Swallowed a Fly*. Viking, 1997.
A lively retelling of an old favorite.

Rosen, Michael. *Poems for the Very Young*. Kingfisher, 2004.
A collection of poems from many cultures.

Any Mother Goose Collection

Resources

Crews, Nina. *The Neighborhood Mother Goose*. Amistad, 2004.
Favorite nursery rhymes with a contemporary look.

Galdone, Paul. *The Three Bears*. Scholastic, 1972.
This, as well as many other folktales, illustrates patterns in language and size.

Recorvits, Helen. *My Name is Yoon*. FSG, 2003.
Korean-born Yoon, or "shining wisdom," dislikes her name as written in English and refers to herself as "cat," "bird," and "cupcake," as a way to feel more comfortable in her new school and country.

Shaw, Nancy. *Sheep in a Jeep*. Houghton Mifflin, 1986.
When five foolish sheep cram into one jeep, their high spirits and lack of foresight combine to make a riotous, if ill-fated, road trip.

Martin, Bill. *Listen to the Rain*. Holt, 1988.
Hear the sounds and the silences of the rain.

Degen, Bruce. *Jamberry*. HarperCollins, 1988.
A little boy meets a big lovable bear who takes him on a delicious berry-picking adventure.

Edwards, Pamela Duncan. *Slop Goes the Soup*. Hyperion, 2001.
Join the chaos in the kitchen as the Warthogs cook soup for their dinner party.

Edwards, Pamela Duncan. *Some Smug Slug*. Sagebrush, 1999.
A self-important slug keeps slithering up a slippery slope, ignoring the warnings of his friends.

Martin, Bill. *Chicka Chicka Boom Boom*. Aladdin, 2000.
An alphabet rhyme/chant that relates what happens when the whole alphabet tries to climb a coconut tree.

Browne, Anthony. *I Like Books*. Random House, 1989.
A young chimp loves all kinds of books from funny books and scary books to song books and strange books.

Little, Jean. *Once Upon a Golden Apple*. Viking, 1991.
Children delight in their father's fractured retellings of familiar fairy tales.

O'Neill, Catharine. *Mrs. Dunphy's Dog*. Viking, 1989.
When Mrs. Dunphy's Dog discovers he can read he develops a taste for the tabloids.

Pinto, Sara. *Alphabet Room*. Bloomsbury, 2003.
Magical scenes unfold in this ABC book.

Tryon, Leslie. *Albert's Alphabet*. Simon & Schuster, 1991.
Clever Albert uses all the supplies in his workshop to build an alphabet for the school playground.

Fleming, Denise. *Alphabet Under Construction*. Holt, 2002.
Mouse is hard at work constructing each letter of the alphabet.

Wells, Rosemary. *Bunny Cakes*. Dial, 1997.
Ruby is baking a cake and Max tries to help – disaster ensues.

Seuss, Dr. *Dr. Seuss's ABC*. Random House, 1960.
Generations of children have learned their ABCs from this book.

Mathematics

Giganti, Paul. *Each Orange Had 8 Slices*. Greenwillow, 1992.
An introduction to counting and simple addition.

Hutchins, Pat. *The Doorbell Rang.* Greenwillow, 1986.
Each time the doorbell rings, there are more people who have come to share Ma's wonderful cookies.

Jenkins, Emily. *Five Creatures*. FSG, 2001.
A girl describes the three humans and two cats that live in her house, and details some shared traits.

McMillan, Bruce. *Eating Fractions*. Scholastic, 1991.
A book using food to demonstrate fractions.

Rathmann, Peggy. *10 Minutes Till Bedtime*. Putnam, 1998.
What the humans at 1 Hoppin Place don't know is that their cherished family pet hamster has advertised on the Web for a "10-Minute Bedtime Tour."

Sayre, April Pulley. *One is a Snail Ten is a Crab*. Candlewick, 2003.
All the animals have toes, but how many toes do they have and are they all the same?

Saul, Carol P. *Barn Cat.* Little Brown, 1998.
A cat's-eye view of 1 green grasshopper, 2 brown crickets, 3 black-and-orange butterflies, all the way up to 10 sparrows.

Dodds, Dayle Ann. *The Shape of Things*. Candlewick, 1994.
Simple rhymes and bold illustrations help youngsters learn to see and draw the world around them.

Slobodkina, Esphyr. *Caps for Sale*. HarperCollins, 1968.
A hat peddler contends with a group of mischievous monkeys.

Thong, Roseanne. *Round is a Mooncake*. Chronicle, 2000.
As a little girl discovers things round, square, and rectangular in her urban neighborhood, she is reminded of her Chinese-American culture.

Hutchins, Pat. *Rosie's Walk*. Scholastic, 1968.
The fox is after Rosie, but Rosie doesn't know it. She leads him into one disaster after the other, each one more fun than the last.

Allen, Pamela. *Who Sank the Boat?* Penguin Putnam, 1982.
The reader is invited to guess who causes the boat to sink when five animals of varying sizes decide to go for a row.

Lionni, Leo. *Inch By Inch*. Scholastic, 1960.
A story of an inchworm who measures his way out of being eaten by a bird.

Tompert, Ann. *Just a Little Bit.* Houghton, 1993.
In order to balance a see saw an elephant and a mouse need help from many friends.

Swinburne, Stephen R. *Lots and Lots of Zebra Stripes*. Boyds Mills Press, 2002.
Swinburne defines patterns as "lines and shapes that repeat" and finds these patterns everywhere.

Resources

Jocelyn, Marthe. *Hannah's Collections*. Dutton, 2000.
Hannah has a challenge: which of her many collections should she choose to share with her class?

Reid, Margarette S. *The Button Box*. Puffin, 1990.
A little boy explores his grandmother's button box.

Christian, Peggy. *If You Find a Rock*. Harcourt, 2000.
Clear illustrations of the many rocks that can be found and used to skip, throw, etc.

Science

Cooney, Barbara. *Miss Rumphius*. Viking, 1982.
Alice Rumphius loved the sea, longed to visit faraway places, and wished to do something to make the world more beautiful.

Doyle, Malachy. *Jody's Beans*. Candlewick, 1999.
Jody and her grandfather plant bean seeds together. He visits occasionally, but it's up to Jody to tend the beans.

Greenstein, Elaine. *One Little Seed*. Viking, 2004.
A simple and captivating look at how seeds grow.

Jenkins, Steve, *What Do You Do With a Tail Like This?* Houghton Mifflin, 2003.
Explore the many amazing things animals can do with their ears, eyes, mouths, noses, feet, and tails.

Asch, Frank. *Water*. Gulliver Green, 1995.
Shows the beauty of water and how vital it is to life.

Ehlert, Lois. *Waiting for Wings*. Harcourt, 2001.
Every spring butterflies emerge and dazzle the world with their beauty. But where do they come from, how are they born, what do they eat?

Cowley, Joy. *Red-eyed Tree Frog*. Harcourt, 1999.
In a tropical rain forest in Central America a red-eyed tree frog spends the night looking for food while avoiding potential predators.

Jenkins, Steve. *Actual Size*. Houghton Mifflin, 2004.
How big is a crocodile? Can you imagine a two-foot-long tongue? Sometimes facts and figures don't tell the whole story, sometimes you need to see things for yourself—at their actual size.

Asch, Frank. *Bear Shadow*. Scholastic, 1985.
A story of a bear and his shadow and how they work things out.

Ehlert, Lois. *Red Leaf, Yellow Leaf*. Harcourt, 1991.
A poetic introduction to the life of a tree.

Karas, Brian. *Atlantic*. Putnam, 2002.
The story of the mighty Atlantic Ocean, beautifully written and illustrated.

dePaola, Tomie. *The Cloud Book*. Holiday House, 1975.
Introduces ten common types of clouds, the myths that have been inspired by their shapes, and what they can tell about coming weather changes.

Mazer, Anne. *The Salamander Room.* Knopf, 1991.
A boy finds a salamander in the woods and imagines the many things he can do to turn his room into a perfect salamander home.

Porte, Barbara. *Tale of a Tadpole.* Orchard, 1997.
Francine and her family watch as their pet tadpole Fred gradually changes into what they think is a frog until Grandpa tells them Fred is a toad.

Three Little Pigs. (many editions available)

Van Allsburg, Chris. *Two Bad Ants.* Houghton, 1988.
Two ants have many adventures in an ordinary kitchen.

Hutchins, Pat. *You'll Soon Grow Into Them Titch.* HarperCollins, 1983.
When little Titch outgrows his clothes, he receives hand-me-downs from his brother and sister. Soon it is his turn to pass along outgrown clothes.

Miller, Margaret. *Now I'm Big.* Greenwillow, 1996.
Several children reflect on the things they did as babies as opposed to the things they are able to do now that they are a little older and bigger.

Social Studies

Bloom, Suzanne. *The Bus for Us.* Boyds Mills, 2001
There's plenty of action when a boy and his little sister wait at their bus stop on the first day of school.

Hirst, Robin. *My Place in Space.* Orchard, 1990.
Henry tells the bus driver exactly where he lives, positioning himself precisely in the universe.

Miller, Margaret. *Where Does it Go?* HarperTrophy, 1998.
Does a bicycle go in the clothes dryer? Do crayons go in the cat's dish?

Walters, Virginia. *Are We There Yet, Daddy?* Viking, 1999.
Every time a little boy asks his Dad, "Are we there yet?" his Dad tells him to look at the map.

Morris, Ann. *On the Go.* HarperTrophy, 1994.
People around the world travel in many ways. we walk and run, ride on animals, and use wheels and boats.

Gorbachev, Valerie. *The Big Trip.* Philomel, 2004.
When Pig and Goat plan a big trip, Goat is worried about traveling. Bicycles are unsteady, horses can throw you off, cars break down and trains can get stuck in tunnels.

Hort, Lenny. *How Many Stars in the Sky?* William Morrow, 1996.
A boy and his father go on a night adventure to count the stars.

Bond, Rebecca. *This Place in the Snow.* Dutton, 2004.
Snow falls silently during the night, blanketing a town in white. The children awaken in the morning to the sounds of a plow and rush outside where a mountain of snow awaits them.

Carlstrom, Nancy. *I'm Not Moving, Mama.* Aladdin, 1999.
Little Bear is sad to move from his old home until Mama tells him of the things they'll share in their new home.

Resources

Daly, Niki. *Where's Jamela?* FSG, 2004.
Jamela doesn't want to move to a new house so she takes refuge in a packing container.

Sweeney, Joan. *Me on the Map*. Crown, 1995.
Simple map drawings from a young girl's bedroom to the whole world.

Hartman, Gail. *As the Crow Flies*. Aladdin, 1993.
An exploration of map skills following the paths of several animals.

Rotner, Shelley. *Everybody Works*. Millbrook, 2003.
A simple, upbeat look at the world of work.

Wells, Rosemary. *Bunny Money*. Dial, 1997.
It's Grandma's birthday, and Ruby and Max know exactly what Grandma would love. Ruby has saved up a walletful of bills, but as unexpected mishap after mishap occurs, money starts running through the bunnies' fingers.

Miller, Margaret. *Guess Who?* Greenwillow, 1994.
A child is asked who delivers the mail, gives haircuts, flies an airplane, and performs other important tasks. Each question has several different answers from which to choose.

Rathman, Peggy. *Officer Buckle and Gloria*. Putnam, 1995.
Officer Buckle's safety tips are ignored by the school children until Gloria, the police dog, helps with the speeches.

Best, Cari. *Taxi! Taxi!* Orchard Books, 1997.
Tina's taxi-driver father comes every Sunday to visit. This time he takes Tina for a drive in the country.

Brisson, Pat. *Wanda's Roses*. Boyds Mills Press, 1994.
Wanda mistakes a thornbush for a rosebush in the empty lot. She clears away the trash around it and cares for it every day, even though no roses bloom.

Morris, Ann. *Tools*. HarperTrophy, 1998.
Photographs of tools with descriptions of how they make life easier.

Morris, Ann. *Houses and Homes*. HarperTrophy, 1995.
A photographic survey of housing around the world.

Cowen-Fletcher, Jane. *Mama Zooms*. Scholastic, 1993.
A boy's mama takes him zooming everywhere with her, because her wheelchair is a zooming machine.

Scott, Ann H. *On Mother's Lap*. Clarion, 1996.
A small Eskimo boy discovers that Mother's lap is a very special place with room for everyone.

Dorros, Arthus. *Abuela*. Penguin Putnam, 1991.
A girl imagines that she and her grandmother can fly over the sights of New York City and see family and friends.

Stuve-Bodeen, Stephanie. *Elizabeti's Doll*. Lee & Low, 1998.
A young Tanzanian girl adopts a rock as her very own "baby doll."

Morris, Ann. *Families*. HarperCollins, 2000.
A look at all kinds of families from all over the world.

Graham, Bob. *"Let's Get a Pup!"said Kate*. Candlewick, 2001.
When Kate and her parents visit the animal shelter, an adorable puppy charms them, but it is hard to leave an older dog behind.

Tsubakiyama, Margaret Holloway. *Mei Mei Loves the Morning.* Albert Whitman, 1999.
Mei Mei and her grandfather enjoy typical morning activities and sights as they bicycle through a busy Chinese city.

Lakin, Patricia. *Dad and Me in the Morning.* Albert Whitman, 1994.
A deaf boy and his father share a special time as they watch the sunrise at the beach.

Haas, Jessie. *Mowing.* Greenwillow, 1994.
When Gramps takes the horses out to hay, little Nora comes along.

Koehler, Phoebe. *The Day We Met You*. Aladdin, 1997.
Adoptive parents narrate the loving preparations made for the day they took their child home.

Curtis, Jamie Lee. *Tell Me Again About the Night I Was Born*. Joanna Cotler, 1996.
A young girl asks her parents to tell her the family story about her birth and adoption.

Thomas, Eliza. *The Red Blanket.* Scholastic, 2004.
A little girl needs a mommy, a forgotten blanket needs a little girl, and a woman needs them both.

Ho, Minfong. *Hush!: A Thai Lullaby*. Orchard, 1996.
A mother tries to keep all the animals quiet so her baby can sleep.

Mollel, Tololwa M. *Kele's Secret.* Lodestar, 1997.
All of Grandmother Koko's hens lay their eggs in unusual places, but the polka-dotted bird, Kele, keeps her nesting place a secret.

McMullan, Kate and Jim. *I Stink!* Joanna Cotler, 2002.
And you thought nighttime was just for sleeping! When the lights go out, a truck spends its time eating your garbage and loving every stinky second of it.

Hall, Donald. *Ox-Cart Man.* Live Oak Media, 1979.
Describes day-to day life through the changing seasons of an early 19th century New England family.

Rylant, Cynthia. *When I Was Young in the Mountains.* Dutton, 1982.
The story of Appalachian childhood.

Creative Expression

Long, Melinda. *How I Became a Pirate.* Harcourt, 2003.
When Jeremy Jacob sets off on a pirate adventure, he loves doing everything the pirates do ... but then he finds out what they DON'T do.

McLerran, Alice. *Roxaboxen.* Lothrop, 1991.
A hill covered with rocks and wooden boxes becomes an imaginary town for Marian, her sisters, and their friends.

Resources

Steig, William. *Pete's a Pizza.* HarperCollins, 1998.
When a rainy day keeps Pete from playing ball outside, his father finds a fun indoor game to play instead.

Cauley, Lorinda. *Clap Your Hands.* Putnam, 1992.
Follow a group of joyous animals and exuberant children as they jump like a frog, hop like a bunny and somersault across the room.

Johnson, Crockett. *Harold and the Purple Crayon.* HarperCollins, 1955.
Crayon in hand, Harold goes out for a walk and draws himself artistic adventures.

Narahashi, Keiko. *Is That Josie?* McElderry, 1994.
An imaginative girl plays a game with her parents.

Pinkney, Brian. *Max Found Two Sticks*. Simon & Schuster, 1997.
Although he doesn't feel like talking, Max responds to questions by drumming on various objects.

Marzollo, Jean. *Pretend You're a Cat.* Viking, 1997.
Young readers can stretch their minds as well as their bodies, thinking and acting like a fish or bird or chick or cow.

Carle, Eric. *From Head to Toe*. HarperCollins, 1997.
What does an elephant do? It stomps its foot. Can you? Children are invited to keep up with these animal movements.

Newcome, Zita. *Head, Shoulder, Knees and Toes*. Candlewick, 2002.

Fifty nursery and counting rhymes accompanied by finger plays and other activities.

Carle, Eric. *Hello, Red Fox.* Simon & Schuster, 1998.
Mama Frog gets a big surprise when the guests arrive for Little Frog's birthday party: Red Fox looks green to her! Orange Cat looks blue! What has gone wrong?

Florian, Douglas. *A Painter.* Greenwillow, 1993.
Describes a painter's tools, his subject matter, and the feelings he feels as he creates pictures.

Gibbons, Gail. *Art Box.* Holiday House, 1998.
All about tools and supplies for drawing and painting.

Walsh, Ellen Stoll. *Mouse Paint.* Red Wagon, 1995.
Three white mice discover jars of red, blue, and yellow paint and explore the world of color.

Hurd, Thacher. *Art Dog.* HarperCollins, 1996.
When the Mona Woofa is stolen from the Dogopolis Museum of Art, a mysterious character who calls himself Art Dog tracks down and captures the thieves.

Lionni, Leo. *Matthew's Dream*. Knopf, 1995.
A mouse discovers his artistic vocation after visiting an art museum.

Falwell, Cathryn. *David's Drawings*. Lee & Low, 2001.
David, a shy young African American boy, makes friends in school by letting his classmates help him with his drawing of a bare winter tree.

Physical Development and Health

Knutson, Kimberly. *Muddigush.* Macmillan, 1992.
Describes the squishy sensations associated with playing in the mud.

Parker, Vic. *Bearobics: A Hop-Hop Counting Story.* Puffin, 1999.
When a shaggy bear turns on the music, it's time for Bearobics.

Rosen, Michael. *We're Going on a Bear Hunt.* McElderry, 1989.
Brave bear hunters go through grass, a river, mud and other obstacles before the inevitable encounter with the bear forces a headlong retreat.

Smalls, Irene. *Jonathan and His Mommy.* Little, Brown, 1992.
As a mother and son explore their neighborhood, they try various ways of walking.

Ehlert, Lois. *Hands.* Harcourt, 1997.
A book about how a family creates things with their hands.

Shulman, Lisa. *Old MacDonald had a Woodshop.* Putnam, 2002.
Old Macdonald is busy using an assortment of tools in her workshop.

Miller, Margaret. *My Five Senses.* S&S, 1994.
A simple introduction to the five senses and how they help us experience the world around us.

Stojic, Manya. *Rain.* Crown, 2000.
A group of African animals use their senses to predict the change of weather.

Young, Ed. *Seven Blind Mice.* Scholastic, 1992.
One by one, seven blind mice investigate the strange Something by the pond. What is it?

Adoff, Arnold. *Touch the Poem.* Blue Sky Press, 2000.
Vivid poems capture the wonders children experience every day through their five senses.

Cash, Megan. *I Saw the Sea and the Sea Saw Me.* Viking, 2001.
At the beach on a summer day, a girl uses each of her five senses to explore her surroundings.

Cole, Joanna. *You Can't Smell a Flower With Your Ear.* Putnam, 1994.
This books tells you all about your five senses.

Hindley, Judy. *Eyes, Nose, Fingers and Toes.* Candlewick, 1999.
A group of toddlers demonstrate all the fun things that they can do with their eyes, ears, mouths, hands, legs, feet - and everything in between.

Showers, Paul. *Listening Walk.* HarperCollins, 1993.
Put on your socks and shoes -- and don't forget your ears!

Ehlert, Lois. *Eating the Alphabet.* HBJ, 1989.
Fun with fruits and vegetables from around the world.

French, Vivian. *Oliver's Fruit Salad.* Orchard, 1998.
Oliver enjoys helping his grandfather pick fruit in the garden, but he doesn't want to eat it.

Resources

French, Vivian. *Oliver's Vegetables.* Orchard, 1995.
Oliver will eat only French fries. His grandfather tells him he may look in the garden for potatoes, but he must eat whatever he finds.

Sharmat, Mitchell. *Gregory the Terrible Eater.* Simon & Schuster, 1984.
A very picky eater, Gregory the goat refuses the usual goat diet staples of shoes and tin cans in favor of fruits, vegetables, eggs, and orange juice.

Wells, Rosemary. *Max's Breakfast.* Penguin, 1998.
Max's sister tries hard to get him to eat his breakfast egg.

Brown, Marc. *D.W. the Picky Eater.* Little Brown, 1995.
D.W. doesn't like most foods and isn't afraid to let everyone know it. Because of her tantrums, she has to stay home when the family eats out.

Rockwell, Lizzie. *Good Enough to Eat.* HarperCollins, 1999.
A children's guide to nutrition and healthy eating. Includes kid-friendly recipes such as Alphabread and Full o' Beans Soup.

Rubel, Nicole. *No More Vegetables!* FSG, 2002.
Her mother agrees to Ruthie's demand for "no more vegetables" as long as she helps out in the vegetable garden.

Royston, Angela. *What's Inside My Body?* DK Publishing, 2002.
This excellent elementary introduction to anatomy is designed to help young children understand the fascinating workings of the human body.

Hest, Amy. *Baby Duck and the Bad Eyeglasses.* Candlewick, 1997.
Baby Duck has new eyeglasses and she does not like to wear them. When grandpa points out the similarities to his own eyeglasses, Baby Duck changes her mind.

London, Jonathan. *The Lion Who Had Asthma.* Whitman, 1997.
Parents and other caregivers will find this story about a real little boy with asthma perfect for helping young children adjust to asthma treatments.

Early Childhood Instructional Videos

These videos are available through NAEYC, Redleaf Press, Teaching Strategies, Teachers College Press, Learning Materials Workshop, and other publishing organizations. We do not officially endorse or recommend any of these products; rather we offer this list as a starting point for your own research into obtaining visual training tools. We encourage you to do further research to see if any of these contain the clips of children at play that you would like to use to illustrate the learning goals and examples of the VELS domains. We also encourage you to make your own videos of children at play—these are invaluable resources to instructors of all kinds. Use your internet search engine (like Google) to find out how to order these.

Building Structures Video & Trainer's Set
This set, which includes a video and a trainer's guide, makes it easy to get teachers started with the *Building Structures with Young Children* curriculum. The video guides children's explorations to help deepen their understanding of the physical science present in building block structures. Eight video vignettes depict the curriculum in use. Classroom scenes demonstrate children building elaborate structures—individually, working with other children, and with the teacher's comments and questions to enhance the experience. The accompanying comprehensive guide includes instructions and print materials for providing training: six basic workshops, eight advanced workshops, a structure for guided discussions, and a section on promoting teacher growth through mentoring. 37 min. Also see the book, *Building Structures with Young Children*, by Ingrid Chalfour and Karen Worth.

Tools for Teaching Developmentally Appropriate Practice (The Leading Edge video series)
With powerful images and clear language, these videos communicate the key concepts of good early childhood practice. In more than three hours of video, divided into segments of 5-12 minutes, you'll see excellent teaching in a wide range of programs, including infant/toddler rooms, child care centers, preschools, family child care homes, kindergartens, and primary-grade classrooms. National early childhood leaders and classroom teachers, administrators, and parents comment on elements of effective, developmentally appropriate practice (DAP). When the videos are used in courses, staff development sessions, or other training sessions, participants gain: a deeper understanding of the core content of the early childhood knowledge base, including the 1997 revised Developmentally Appropriate Practice in Early Childhood Programs and the reasons behind its changes; effective and easy ways to organize DAP content to teach it to other people; and new tools and strategies to communicate complex DAP concepts to varied audiences.

Windows on Learning: A Framework for Making Decisions (video)
Careful observation gives teachers insight into what children know, what they are beginning to learn, and where their interests lie. Filmed at the Valeska Hinton Early Childhood Center in Peoria, Illinois, this video is a useful introduction to documenting children's learning in the classroom context. Shows documentation in action in an urban early childhood setting. Produced by Macomb Projects, Western Illinois University. 20 min.

Teaching the Whole Child in the Kindergarten (video)
Beautifully depicts elements of developmentally appropriate teaching, curriculum, and assessment in two kindergarten classrooms, public and private, in Hawaii. It

illustrates principles of good practice, such as integrated curriculum, that can be applied in any location. 27 min.

Block Play: Constructing Realities
Blocks are timeless materials that give children joy and a means of self-expression and learning. This video examines how children acquire knowledge and skills through block play. Describes skills and the stages of building. Produced by South Carolina Educational Television. 20 min.

Sensory Play: Constructing Realities
Examines how a child's First-hand sensory experience contributes to overall development. Sensory play is a natural and concrete means of supporting each child's individual learning style. Produced by South Carolina Educational Television. 18 min.

The Early Childhood Program: A Place to Learn and Grow (video series)
Complete set of seven videos, plus an introductory (overview) video, covering the key issues faced by early childhood programs. The videos feature children (ages 3-8), families, teachers, administrators, and experts. Settings include public schools and other early childhood programs in rural and urban communities. The seven titles (also available separately) include: "The Early Childhood Program: A Place to Learn and Grow," "Nurturing Growth-Child Growth and Development," "Places to Grow: The Learning Environment," "Play-The Seed of Learning," "An Idea Blossoms-Integrated Curriculum," Charting Growth-Assessment," "Cultivating Roots-Home/School Partnerships," "Seeds of Change-Leadership and Staff Development." Set includes a handy carrying case. Introductory video is 15 min.; others are 30 min. each.

The Child Care Collection (video series)
The Child Care Collection's videos have been produced to help those who care for young children create positive and appropriate experiences at home and in their classrooms. The videos were filmed in licensed child care homes and centers in the state of Indiana. Relevant titles include *Dramatic Play: More than Playing House; Exploring Science and Nature; Structured Play: Gross Motor Activities for Every Day,* and more.

The Whole Child: A Caregiver's Guide to the First Five Years (video series)
Thirteen half-hour video programs, taped at working childcare centers, show real caregivers and children working and playing together in ways that facilitate children's learning and development. The programs highlight teaching approaches and interactions with children from multicultural backgrounds and of all developmental levels including those with disabilities and special needs.

For Children, Life is A Creative Adventure
This video illustrates some of the ways adults can help children engage in a wide variety of art, music, movement, and dialogue experiences, both individually and in small groups. (Available through Head Start Information and Publications Center, www.headstartinfo.org/publications/publicat.htm

Thinking Big: Extending Emergent Curriculum Projects
Preschool teachers Ann Pelo and Sarah Felstiner expand their view of children as capable learners and extend emergent curriculum projects into the community. Those who have viewed *Children at the Center* and *Setting Sail* will discover Ann and Sarah teaching with a deeper understanding of the ideas of Reggio Emilia. They guide their four and five year olds to deepen their learning as they represent and re-represent

their ideas with different art media. (Available from Harvest Resources, P.O. Box 22106, Seattle, WA 98122-0106.)